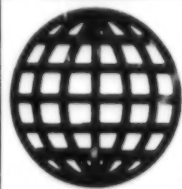


JPRS-TND-92-018
10 JUNE 1992



FOREIGN
BROADCAST
INFORMATION
SERVICE

JPRS Report

Proliferation Issues

PROLIFERATION ISSUES

JPRS-TND-92-018

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10 June 1992

[This report contains foreign media information on issues related to worldwide proliferation and transfer activities in nuclear, chemical, and biological weapons, including delivery systems and the transfer of weapons-relevant technologies.]

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JAPAN

Conference Proposes World Register of Arms

OW0206135x62 JPRS 92-018
2 Jun 92

[Text] Tokyo June 1 (Kyodo) — A national workshop on disarmament discussed ways to enter Japan's arms in the U.N. Register of Conventional Arms, officials said.

Officials said Tuesday a meeting of experts from 24 countries, including European experience with the Register, and then moved on to discuss how it could be used to achieve disarmament. An afternoon session saw a number of working groups on how the Register could be improved and expanded. The meeting Monday and was the first of a series.

Those discussions focused on Japan's holdings and the accuracy of its inventory, domestic production of conventional weapons. Many developing countries were also present, arms imports for the Register. They said that promoting exports of conventional weapons is unfair.

Officials said the second goal was to enhance transparency in the Register, mass destruction and the Register account already. They said that countries with Egypt, India, and the Soviet Union cover weapons of mass destruction. Conventional weapons, Japan said, are the idea, insisting that the Register are adequate and working. The Register would be a pressing need to register.

The discussion followed a meeting among the five permanent members of the Security Council on a set of guidelines for the Register of weapons of mass destruction. The Register would be a pressing need to register.

The Tokyo meeting was a follow-up to discussions by a "Contact Group" of five nations to meet for a third time. The group is a technical procedure for the Register and nuclear.

The Register gained approval at the U.N. General Assembly in 1979. It is a widespread recognition of the Register. The question of international arms control in the Persian Gulf was a major issue. The relevant resolution was adopted in 1990 while the test-improving, arms control.

Minister Koji Kakizawa said Japan hopes to see as many countries as possible provide data for the Register. He said that during the course of the Register, Japan would call in particular on China to provide data to the Register when the registration process was next year.

Minister Donowaki, Japan's ambassador to the U.N. Conference on Disarmament, called for a "new approach" to seize this unprecedented opportunity. He said to ensure the smooth operation of the "U.N. Register."

He said that since the end of the cold war, the United Nations has played a greater role in maintaining international peace and security.

He said that Japan could do little more than to support the Register. He said that the Register would be a pressing need to register.

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SOUTH KOREA

Official Says North Has Hidden Nuclear Sites

OW0206135x62 JPRS 92-018
10 Jun 92 0555 GMT

Seoul June 1 (AP) — A former North Korean official who defected to South Korea last year said that North Korea has hidden nuclear facilities. He said that the International Atomic [Energy] Agency (IAEA) should investigate the Seoul-proposed facilities. He said that the IAEA should investigate the Seoul-proposed facilities.

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Ko emphasized that North Korea has grand-scale underground facilities and tunnels throughout its territory, and the IAEA inspection or the mutual inspection proposed by South Korea would be unable to find them even if they searched for 10 years.

Ko was a section chief in the African Affairs Department at North Korea's Foreign Ministry prior to his defection in May 1991.

North Denies Ability To Mass Produce Plutonium

SK3105035192 Seoul YONHAP in English 0250 GMT 31 May 92

[Text] Washington, May 31 (OANA-YONHAP)—North Korea's nuclear recycling experiments are only half complete and cannot mass produce plutonium, Kim Pyong-hong, vice director of the North Korean Research Institute of Disarmament and Peace, said Saturday.

Pyongyang will keep building nuclear power plants for electricity supply, and recycling capability to produce maximum electricity from small amount of nuclear fuel is at an experimental stage, Kim said.

The vice director made the remarks at a press conference following a seminar here co-sponsored by George Washington University and Japan's YOMIURI SHIMBUN.

On ongoing talks for inter-Korean nuclear inspection, Kim said the talks will not progress because South Korea insists on seeing North Korean military facilities.

He repeated North Korea's refusal to accept South Korea's challenge inspection on its nuclear facilities, saying his country is not capable of producing nuclear weapons.

"We plan to build many nuclear power plants of 200 mw to 300 mw scale" Kim told the press conference.

He denied allegations that North Korea can produce mass amount of plutonium, core ingredient of an atomic bomb, saying the reprocessing experiments are only half complete.

International Atomic Energy Agency (IAEA) Director-General Hans Blix said after his North Korean visit earlier this month that he saw facilities in Yongbyon which, when completed and put into operation, would be nuclear reprocessing installations.

North Korean officials admitted to having successfully extracted plutonium for experimental purposes. South Korean and Western officials believe North Korea can immediately develop these pilot experiments to produce enough plutonium to make atomic bombs.

Kim, insisting that the reprocessing capabilities are only in experimental stage, said North Korea can prove it through the IAEA inspection under way from May 25.

"South Korea demands to see our military installations for nuclear inspection, something that should be discussed by the inter-Korean joint military commission.

Instead, it is raising the issue at the Joint Nuclear Control Commission," said Kim.

There is no need for challenge inspection, an inspection regime demanded by South Korea, since North Korea is not capable of making atomic weapons, he said.

New Envoy to IAEA on Use of Atomic Energy

SK0506014092 Seoul THE KOREA TIMES in English 5 Jun 92 p 2

[By staff reporter Sin Hak-nim; from the "Figure in Focus" column]

[Text] The designation of former Science-Technology Minister Chong Kun-mo as ambassador to the Vienna-based International Atomic Energy Agency (IAEA) yesterday testifies to the government's positive intention to expand cooperation for the peaceful use of atomic power.

Chong said during a press conference yesterday that South Korea is ready to extend technical assistance to other developing countries through international organizations including the IAEA.

He said that South Korea is one of the most successful countries among the 116 member countries of the IAEA in using atomic power for peaceful purposes. South Korea ranks ninth in terms of producing electricity by atomic power and third in terms of the ratio of electricity by atomic power to total electricity generated.

Dr. Chong will serve as ambassador in charge of cooperation in atomic power in the international community for one year.

"One of my foremost tasks will be to promote multilateral cooperation in the peaceful use of atomic energy through the IAEA," said Chong, 52.

He said that South Korea has made progress in developing its atomic power industry and accumulated experience in the use of isotopes. "Therefore, our country is ready to provide technical assistance to other countries."

Chong, one of the leading nuclear physicists in Korea, has served in the IAEA for a long time. He was governor and member of the International Nuclear Safety Advisory Group of the IAEA for four years from 1985 and president of its general conference for one year from 1989.

After graduating from Seoul National University, Chong won a doctorate degree in physics at Michigan State University in 1963. Since then, he served in major posts of institutes on nuclear engineering at home and the United States, including the Polytechnic Institute of New York.

He was a member of the Presidential Commission on Science and Technology and chairman of the Korea Science and Engineering Foundation before he was named science-technology minister in 1990.

As to the role of the IAEA, Chong said that the agency is increasingly playing bigger roles in the peaceful use of atomic energy and in the prevention of proliferation of nuclear weapons.

"I will devote myself to serving for the peaceful use of atomic energy rather than in the IAEA activities for the non-proliferation of nuclear weapons," said Chong.

Touching on North Korea's nuclear weapons development program, Chong said that the IAEA report on its "ad hoc" inspection of North Korean nuclear facilities to a meeting of its board of governors to open on June 15 will show how far Pyongyang is in its nuclear weapons development.

"At present, I agree with IAEA Director-General Hans Blix's assessment that the North is building large-scale nuclear reprocessing facilities," said Chong.

Calling attention to a lesson from the IAEA's failure to check the Iraqi nuclear weapons development program

by "routine inspections," Chong asserted that the projected bilateral nuclear inspections by the South and North are more important than the IAEA inspection in preventing the North from going nuclear.

"If the North forgoes its nuclear weapons development program completely and commits itself to the solely peaceful use of atomic energy, I believe that our government is willing to extend technical assistance to the North for the development of a nuclear power industry," Chong said.

Recent global trends show that nuclear power energy is being reassessed as an alternative energy source for fossil fuels as increasing emissions of carbon dioxide is threatening the atmosphere, causing global warming by "greenhouse effect," he said.

In that respect, he added that the ongoing "Earth Summit" in Rio de Janeiro under the auspices of the U.N. Conference on Environment and Development (UNCED) will provide a turning point for the peaceful use of atomic energy.

ARGENTINA

Reports on Condor-2 Missiles in 'Secret' Arsenal

U.S. Fears Transfer to Mideast

PY3105213892 Buenos Aires CLARIN in Spanish
31 May 92 p 16

[Text] A book that will be published soon states that Argentina has hidden two Condor-2 missiles that are ready to be fired in a secret arsenal. With a range of 1,200 km, they could reach the Malvinas Islands from the continent, however, the United States fears that Argentina will not fire this weapon, but will transfer its technology to an Arab country instead. The Argentine Government announced the deactivation of this project last year.

"Argentina has stored in its most secret arsenal two Condor-2 missiles, which are ready to be fired at any objective within a distance of 1,200 km, with an error margin of 3,000 meters, and which could be armed with a warhead that Argentina may be capable of obtaining at the last moment," states a chapter in the book "Carnal Relations, the True Story of the Construction and Destruction of the Condor-2 Missile" [Relaciones Carnales, La Verdadera Historia de la Construcción y Destrucción del Misil Condor II].

This sentence from the book, which will soon be published and which was written by journalists Eduardo Barcelona and Julio Villalonga, continues as follows:

"The reestablishment of diplomatic relations with the United Kingdom, which reserves the issue of the sovereignty of the islands for spiny talks in the future; the submission of the Argentine military; and the fact of Argentina siding with the United States internationally make returning to the century-old conflict over the archipelago, where an absurd war took place, unthinkable.

"Although Argentina may not do much with what it has (it cannot attach devastating warheads to the two missiles), the launch of a Condor-2 missile would, without a doubt, cause an international uproar.

"The major harm that Argentina could cause with the missile is to export the technology to some unstable country. The eventual decision to launch the missile at the capital of the Malvinas or at a British fort on the islands would be a minor tragedy in comparison with the possibility of transferring missile technology to some Arab leader, for example.

"Saddam Husayn's Iraq was eclipsed after the Gulf war; Syria, Libya, and Iran are now the only Arab nations capable of continuing the eternal struggle against Israel. As long as the Golan Heights are not returned to their previous owners, there will be a conflict between the crescent moon and Tel Aviv, not to mention the conflict

that already exists over the annexed Palestine territories. Although the Cold War is over, the Middle East is still, at the least, warm.

"Only within this international context, where the most remote confrontations can be followed closely in this century of communications, may the objective of the U.S. Embassy in Buenos Aires, as voiced by one of its usual spokesmen, be understood. 'We will not stop until we are sure the transfer of this technology is impossible,' said Ernesto Uribe, counselor at the U.S. Embassy in Buenos Aires in September 1991. That was four months after the Argentine Government had announced the deactivation of the missile project and when the subject had long been absent from newspaper headlines."

Technology To Be 'Recycled'

PY0206225792 Buenos Aires CLARIN in Spanish
2 Jun 92 p 4

[Text] The government will try to convince the National Institute for Aerospace Technology (INTA) of Spain and the newly created National Commission for Space Activities (Conae) [Comisión Nacional de Actividades Espaciales] to sign within the next few hours a framework agreement for bilateral cooperation.

The Foreign Ministry yesterday formally received a delegation of INTA scientists who, within the next few days, will visit the secret Falda del Carmen plant in Cordoba where the now dismantled Condor-2 missile project was developed.

The Menem government announced just over a year ago, on 28 May 1991, the dismantling of the missile project that was developed secretly by the Air Force in cooperation with German companies and Egypt.

Reliable Foreign Ministry sources have told CLARIN that the agreement will help Argentina recycle the technology and the plant where solid fuel was produced and the missiles were assembled, under a program to construct vehicles to be used to launch satellites into orbit.

The two missiles that remain from the project "cannot be recycled" due to technical problems, according to the sources.

Andres Cisneros, chief of the Foreign Ministry staff and a Conae member, is politically responsible for converting the Condor-2 project into peaceful means.

Conae replaced the defunct National Commission for Space Research (CNIE) which developed the Condor-2 and was subordinate to the Air Force. The Conae is currently under the direct control of the Presidency of the Republic.

One advantage for Spain would be that Argentina is one of the few countries that has access to polar orbits for satellites and that Falda del Carmen houses some of the most modern space technology. The difference between a rocket and a missile is that a rocket lacks a guidance

system for parabolic launching [tiro parabolico] and an intelligent warhead, among other characteristics.

Moreover, the Foreign Ministry "will fight" for the formal acceptance of Argentina in the Missile Technology Control Regime (MTCR) at the meeting the group will hold later this month in Oslo, Norway.

Last year Argentina unilaterally signed the agreement that is controlled by developed countries to prevent the proliferation of medium-range missiles like the Condor-2, which had a range of up to 1,200 km.

Another point in Argentina's favor is the fact that the Argentine delegation that will leave for Oslo will be able to report that it has recently been removed from Germany's so-called "H" list, which prevents German companies from transferring dual technology (for military and civilian use) to countries considered unreliable.

Reports on Nuclear Privatization Plan

Cavallo Outlines Plan

PY0705205092 Buenos Aires NOTICIAS ARGENTINAS
in Spanish 2242 GMT 6 May 92

[Text] Buenos Aires, 6 May (NA)—Economy Minister Domingo Cavallo has said in Germany that the Economy Ministry and the National Commission for Atomic Energy "are studying the possibility of privatizing all nuclear plants, Atucha 2 included, in order to complete their construction."

In remarks made from Bonn to a Buenos Aires radio station, Cavallo noted that in order to implement this project "the first step would be to obtain congressional authorization. This is why I said that the subject will not be addressed until next year because we are just concluding the studies now."

Cavallo added: "We are privatizing major sectors now and we could not possibly undertake that of the nuclear plants at the same time."

Cavallo noted that the announcement he made earlier on this subject was prompted by the interest expressed in the Argentine Government's plans by Spanish businessmen operating nuclear plants.

Asked about the possible refusal by insurance companies to cover the risks involved in this project, Cavallo said: "These problems have been adequately resolved" because "there are countries, like Spain, where atomic plants are privately operated."

In reply to another question, Cavallo said that "there is no connection" between the project to privatize atomic plants and President Carlos Menem's decision to sign the nonproliferation treaty.

Cavallo said: "The Argentine and Brazilian decision to join the treaty—we hope Chile will do the same—proves that these countries will not use their nuclear technology for military purposes."

Cavallo then said that in his opinion the transfer of nuclear plants to private hands "does not require a political discussion but only a technical analysis, which is what we are doing now in Argentina."

Cavallo stated: "It is President Menem's decision to transfer all state business activities to the private sector so that the state can adequately perform those services designed to bring well-being to the people."

Cavallo added: "Thus, any activity related to the generation of electricity, irrespective of its source, will have to be transferred to the private sector."

Commenting on the Spanish Government's decision to support a 50-percent reduction of the Argentine debt to Spanish banks, Cavallo said: "This is consistent with the treatment Spain has given to other countries that have qualified for the Brady Plan."

The Argentine economy minister noted that the Spanish Government's support "is advantageous for our country on two fronts: [words indistinct] a larger reduction; and we will not be required to constitute guarantees because the Spanish Government itself will be our guarantor."

CNEA Chairman Interviewed

PY1905231492 Buenos Aires CLARIN in Spanish
19 May 92 p 16

[Interview with Manuel Mondino, National Commission for Atomic Energy, CNEA, chairman by unidentified correspondent on 18 May—place not given]

[Text] [CLARIN] What did you discuss with Minister Domingo Cavallo during your 15 May meeting?

[Mondino] We discussed the plans to call for private capital to participate in the National Commission for Atomic Energy activities.

[CLARIN] Did you discuss specific privatization plans?

[Mondino] No, because here we are not talking about privatizing, but about incorporating [allegar] private capital.

[CLARIN] Well now, it is the same.

[Mondino] No, it is not the same, because we will not give away anything. The idea is to form a holding [preceding word in English] with four companies for each area, and private capital will have room in them.

[CLARIN] Did you talk about transforming ENACE [Argentine Nuclear Enterprise for Electrical Power Plants] into an operating company for the two power plants [Atucha I and Embalse]?

[Mondino] That is just an idea, nothing else.

[CLARIN] Did Cavallo talk about the interest of Spanish companies in operating Atucha I and Embalse?

[Mondino] Cavallo told us that the remarks he made in Spain had been exaggerated.

[CLARIN] Nevertheless, Cavallo met with nuclear companies in Spain.

[Mondino] Yes, but they said a lot of nonsense. In Spain, 80 percent of the operation of the nuclear power plants is in the hands of the state through the Endesa [National Electric Co. Inc.]. There are two other companies that are very small, unimportant.

[CLARIN] What would be the state's and the private capital's share in the future company operating the power plants?

[Mondino] It is very difficult to say. There are two factors that must be borne in mind: First, the nuclear risk; and second, who will pay the private [companies] for the unproduced electricity in case one of the power plants breaks down? All this will define the share percentage. I personally believe the operation must be in the hands of the CNEA because no one else can handle it here. This is not like greasing a machine.

[CLARIN] Did you talk about the need to reduce personnel?

[Mondino] No, not at all. Here we have a voluntary retirement plan that is being carried out. I believe there are many slobos who are spreading groundless reports. These are the same slobos who said that the government planned to intervene in the CNEA, something that was subsequently denied by the president himself in Turkey.

[CLARIN] We assume that all these plans must be approved by Congress. Or isn't it necessary?

[Mondino] Of course. Everyone forgets this: Any change must indeed pass through Congress.

BRAZIL

Digicon Develops Missile Guidance System

92SM0403A Sao Paulo GAZETA MERCANTIL
in Portuguese 23 Apr 92 p 10

[Article by Sao Paulo correspondent Mariluce Moura]

[Text] The Rio Grande do Sul firm of Digicon, one of Brazil's most dynamic companies in the field of industrial automation, has completed—after an eight-year development effort in partnership with the Research and Development Institute [IDP] and the Army Technological Center [Cetex]—the control and guidance equipment, i.e., the intelligent part, of the Army's new surface-to-air missile, the 3.2.

Tests of the prototype of the short-range missile, which is supersonic, can be guided optically or by radar, and has an autonomy of 6 km—a distance it travels in about 15 seconds—were completed recently at Cetex in Guaratiba, Rio de Janeiro State. Already approved, it is now going to be produced, in quantities yet to be determined by the Armed Forces, by a group of companies that includes, besides Digicon, Imbel [War Materiel Industry], Ambalit, and others.

It was Digicon's experience in industrial automation and precision machinery, according to Jose Carlos de Araujo, manager of the firm's Advanced Technology Division, that gave it the foundation to "meet, using CAD/CAE/CAM [computer-aided design/computer-aided engineering/computer-aided manufacturing] systems, the challenge of building the intelligent part of the device," which until then had required imported technology.

"All the development work was done internally by 12 Digicon engineers, following Army specifications and working in close cooperation with the Army's R&D people," Araujo said. They had to develop some of the materials, achieve the highest precision in the degrees of balancing of some instruments, and plan new processes for manufacturing parts.

The result is a machine for defending strategic sites such as airports, hydroelectric plants, and border areas. Although it does not represent the peak of advanced military technology, "it is up-to-date and adapted to the state of the art for this kind of device," observed Digicon's technical director, Corrado Lacchini.

The technology that has now been mastered can also be used for surface-to-surface and shore-to-ship missiles. And some of the components developed, such as the gyroscopes—sensors that measure angular velocity—may prove to have civilian applications.

Now that the missile has been developed, Digicon is getting ready to tackle a new stage of the same project, the command system for the launch vehicle. "All the controls on the launcher are automatic, so this is our next challenge in the defense field," Araujo said.

Smart Components

The company has worked in stages during the past eight years. Its first task was to develop the inertial system, i.e., the two high-precision pieces of equipment, the gyroscope and the gyrometer, that tell the operator the exact position of the missile in relation to the mobile target that he is supposed to hit.

"The gyroscope keeps us continuously informed of the angle at which the target is moving, and the gyrometer measures angular velocity. The large volume of data that can be obtained every second is monitored on the so-called boundary line, by means of the sights in the command area," Araujo explained.

The second stage was the development of the guidance control mechanism. Then came the military payload actuator and the thermal insulation. "The temperature inside the missile reaches 2,000 degrees Celsius, but its aluminum cladding will only withstand temperatures up to 600 degrees Celsius. The biggest job here was to produce asbestos-based resins and other insulating materials to keep the temperature of the aluminum cladding down to about 200 degrees Celsius, explained the manager of the Advanced Technology Division.

The final stage was development of the stabilizers, which are responsible for rebalancing the center of gravity and thrust of the missile that change as the fuel burns up in the engines, with solid propellants in the booster engine. "It is in that area, not just in the guidance control system, that the possibility for increasing the maneuverability of the missile lies. It would have to exceed 6 G's (a G being the unit of measurement of the acceleration of gravity), which is more or less the maneuverability of a fighter plane," Araujo noted.

The job given to Digicon, which had sales of \$10 million in 1991 and, according to its president, Joseph Elbling, "showed a significant loss, although the company's balance sheet will not be released until sometime during the next several days," was to develop all the components that receive data from external sources, process it, and activate commands to maneuver the missile.

Digicon S.A.—Controle Eletronico para Mecanica has 280 employees, of whom 35 work in research and development. "Our investments in R&D vary from 10 to 12 percent of sales," Elbling said.

Nuclear Program Replaced by Electric Energy

PY2405232892 Rio de Janeiro O GLOBO
in Portuguese 23 May 92 p 5

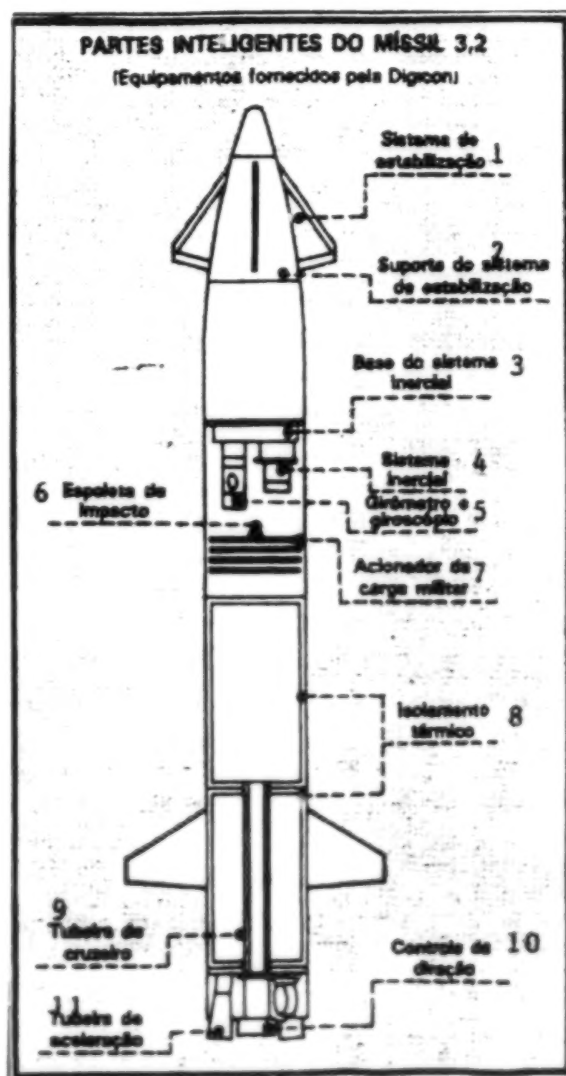
[By correspondent Mozart de Carvalho]

[Text] Paris—Science and Technology Secretary Helio Jaguaribe yesterday announced that beginning next year, Brazil will again invest in electric energy production. During an interview with O GLOBO, Jaguaribe ruled out the possibility of resuming the nuclear program, which will remain frozen for a 10-year period "until all the safety problems of those power plants are resolved." According to the secretary, the increase in energy demand will be met with the construction of new hydroelectric power plants and exploration for and the importation of natural gas, including the installation of gas pipelines linking our country with Bolivia and Argentina.

The secretary emphasized: "We will complete construction of the Angra-2 power plant, but we established limits to the Brazilian-Argentine nuclear agreement, and we will only resume our atomic energy alternative when it is clean. Obviously, there will be a time when resorting to atomic energy will become inevitable, but until that

time arrives...I believe liquid hydrogen is the fuel of the future, but we still do not know its cost."

Intelligent Parts of the 3.2 Missile (Equipment supplied by Digicon)



Key:

1. Stabilization system
2. Support for stabilization system
3. Base of the inertial system
4. Inertial System
5. Gyrometer and gyroscope
6. Impact fuse
7. Military payload actuator
8. Thermal insulation
9. Cruising cone
10. Guidance control
11. Booster cone

INDIA

Official Reaction to U.S. Space Ban Viewed

BK1505063992

[Editorial Report]

While there has been a strong adverse public reaction in India to the two-year ban imposed by the United States on trade and the transfer of technology to the ISRO and the Russian firm Glavkosmos after New Delhi refused to drop plans to import Russian technology—Washington believes that the deal violates the nonproliferation treaty known as the Missile Technology Control Regime—Indian official reaction has been rather mild and even muted to a certain extent, contrary to past official reaction in similar cases, which has been full of strong rhetoric against any such action.

Responding to "unanimous condemnation" of the U.S. sanctions by the members of parliament, who wanted New Delhi to retaliate by cancelling the planned joint naval exercises in the Indian Ocean, Minister of State for Personnel Margaret Alva, while expressing concern, told the parliament on 12 May that "India's technology is capable of meeting the challenge" and "New Delhi is determined to protect the freedom of choice" for technology, reports Delhi All India Radio. All India Radio also reports that Defense Minister Sharad Pawar, although not naming the United States, defended the decision to hold joint naval exercises, saying "such exercises will go a long way in creating better understanding and inter-navy cooperation."

A government official spokesman's 12 May comments on the issue could be interpreted as subdued. While pointing out Indian efforts to develop "indigenous capabilities," the spokesman clarified that "the decision certainly has generated misunderstanding in parliament, and elsewhere, about U.S. policy perceptions, and to that extent it is an avoidable irritant in our bilateral relationship with USA" reports Delhi ISI Diplomatic Information Service in English.

Assessing the impact of U.S. sanctions on the Indian space program, ISRO chief U. R. Rao admitted that "certainly, it would affect us to some extent because we do import a number of components [from the U.S.], particularly space qualified components." He said: "It will have an affect of delaying our program a little bit, and we may have to spend more money," noting that efforts to produce such components indigenously had not been made as to do so had been considered economically unviable. He, however, promised continued service in the fields of communications, TV broadcasts, management of natural resources, and meteorology. This was reported by Delhi Doordarshan TV Network in English.

There has been no reaction from Prime Minister Narasimha Rao, who also heads the External Affairs Ministry, since the sanctions were announced on 11 May. However, at a Congress-I Party meeting on 8 May,

without referring to the U.S. objection to the rocket engine deal, Rao said "India cannot be pressurized or its arm twisted," adding that "India is, however, not prepared to isolate itself" reports Delhi Doordarshan TV Network in English. An All India Radio commentary, also broadcast before the U.S. announcement, while noting that the India-Russia deal has no military aspect, said that "the main reason behind the American objection is that it [the U.S.] does not want the element of competition in this field" and "the USA also does not want India to join the exclusive club of nations that have the capacity to place satellites in geostationary orbit."

Indian opposition parties have reacted to the U.S. decision with sharp criticism. According to All India Radio, in a statement the Bharatiya Janata Party said that "by opposing an open agreement, Washington is trying to put undue pressure on New Delhi." All India Radio also reports that in a press statement, the Politburo of the Communist Party of India-Marxist urged the government to "declare unambiguously India's determination to stick to the agreement between New Delhi and Moscow." Janata Dal spokesman Harikishore Singh told newsmen that in retaliation, India should cancel joint naval exercises with the United States.

Nuclear Test Said Factor in Deciding Policy

BK0506032692 Delhi All India Radio Network in English 0245 GMT 5 Jun 92

[Text] The chairman of the Atomic Energy Commission, Dr. P.K. Iyengar, has urged the political leadership in the country to take into account the recent Chinese nuclear test before framing India's response to nonproliferation. He told newsmen in Puna as a country we are not against nuclear nonproliferation, but some countries continue to demonstrate their nuclear weapons capability. He said the recent Chinese nuclear explosion has shown that they are still sharpening their arsenal.

In reply to a question, Dr. Iyengar said no decision has been taken on the sale of a nuclear reactor to Iran.

IRAN

Chemical Project Agreement Signed With China

LD2605035392 Tehran Voice of the Islamic Republic of Iran First Program Network in Persian 1630 GMT 25 May 92

[Text] The Pars Sodium Carbonate company—affiliated with the investment company of the Social Security Organization—and the National Chinese Industries signed an agreement to build a 200,000-tonne sodium carbonate and sodium bicarbonate production complex in Khuzestan. The project will be completed in four years and will cost over 90 billion rials.

IRAQ

German Professor: Allies Used 'Nuclear Bullets'

JN0306074892 Baghdad THE BAGHDAD OBSERVER in English 1 Jun 92 p 1

[By Dunya Mikhail]

[Excerpt] A famous German professor said the allied forces, in their war against Iraq, used nuclear bullets made of depleted uranium "which may cause cancer and other unknown diseases".

Professor Siegwart Gunther [name as published] told THE BAGHDAD OBSERVER that some 50 tonnes of these radioactive bullets are still in the battlefield, and "some Iraqi children are playing with these bullets as toys unaware of their dangerous effects". He called upon parents to prevent their children from playing with these bullets and asked the government to collect them aside.

Few months after the Gulf war, professor Gunther found a number of these bullets near a highway linking Baghdad to Amman, Jordan. "They were so heavy that I felt suspicious", he said.

The present spread in Iraq of such diseases as cancer, leukemia and an unknown disease which causes abdomen distention can be attributed partly to these bullets, he said. The health situation is yet aggravated because of the deficiency of vitamin A which exists in milk, meat, fish, eggs and butter whose prices are so high in Iraqi markets that poor families cannot afford because of the on-going economic sanctions.

Next week, professor Gunther will go to the southern province of al-Basrah to carry out further investigations on these radioactive uranium bullets which, he said, were used by allied forces as tactical nuclear weapons and by Iraqi children as toys. "The German technology is so developed, but the German army said that they never used such bullets," according to professor Gunther.

Professor Gunther said he had told the German media that the US army was equipped with high-tech munition made of nuclear wastes that could melt layers of the armours protecting Iraqi crews.

"Not coincidentally, those same tank-killing shells will probably turn the Iraqi desert into a permanently toxic hellhole for generations to come," he pointed out.

Depleted uranium penetrator bullets are about the size of a cigar and weigh up to eight pounds. When fired, the uranium bursts into flame and all the bullet liquifies searing through steel armour like a white hot phosphorescent flare. The heat of the shell causes any diesel fuel vapours in the enemy tank to explode, and thus the crew inside is burned alive, the professor investigated.

Known for his humanitarian activities professor Gunther has recently got permission to send some 40 Iraqi children to be treated at the Dresden University's Hospital in

Germany. The selection of these children, who are victims of war, is being arranged in cooperation with the Iraqi Red Crescent Society, he said. [passage omitted]

Regime Said Using Chemical Arms in Marshlands

NC2905174592 (Clandestine) Voice of the Kurdistan Revolution Radio in Arabic 1541 GMT 29 May 92

[Text] A number of Iraqi Army officers have told opposition sources that the dictatorial regime has several containers of chemical material and powder, as well as barrels containing napalm, in the Iraqi marshlands. The officers say that the regime has used these chemical weapons against marshland inhabitants.

Similar weapons were used to put down the popular uprising last year.

Escaped Nuclear Scientist 'Hidden' in Tehran

PM1905145992 London SAWT AL-KUWAYT AL-DUWALI in Arabic 16 May 92 p 1

[Unattributed report: "Iranian Sources Reveal: Iraqi Nuclear Scientist Shahrastani Alive, Residing in Tehran"]

[Text] Tehran—SAWT AL-KUWAYT has learned from informed Iranian sources that the well-known Iraqi nuclear scientist Dr. Husayn Shahrastani has been residing in Iran since a few months after his escape from prison during the Gulf war. He had hidden in a northern area in Iraq for several months.

The sources said that Shahrastani, who belongs to the well-known Shahrastani family and is a relative of the late scholar Ayatollah El-Ozma Shahrastani, was working at the Iraqi "Tammuz" reactor when Israeli aircraft bombed it at the start of the Iraq-Iran war. The Iraqi authorities arrested him on charges of cooperating with Iran and involvement in the operation to attack the reactor. An Iranian source who met with Shahrastani after he turned to Iran said that Shahrastani was exposed to brutal moral and physical torture in Saddam Husayn's prisons, where he spent a full eight years in solitary confinement.

As is known, the Iraqi opposition announced after Shahrastani's arrest that he had died as a result of torture, and international human rights organizations confirmed the senior nuclear scientist's death in their reports.

The Iranian sources said that Tehran has allocated guards to protect Shahrastani, who resides in a building in north Tehran.

LIBYA

Report on DPRK 'Nodong-1' Missile Deal Denied

LD0206174692 Tripoli JANA in English 1703 GMT 2 Jun 92

[Text] Tripoli, al-Sayf [June] 2, JAMAHIRIYAH NEWS AGENCY—The Italian newspaper CORRIERE DE LA

SERRA claimed yesterday, quoting sources connected to Western intelligence that the Libyans are negotiating deals to acquire a new missile made by North Korea and called Nodong-1 and that Libya is preparing to manufacture the missile locally.

The Italian paper alleged that a deal was struck with some German companies to produce a missile with a range of thousand kilo-metres and that several components of the missile were seized in European ports.

The JANA international affairs editor wrote the following comment in respect of this report.

Those allegations perpetuated by the Italian CORRIERE DE LA SERRA come within the pattern of the vicious campaign launched by the Western press and the international intelligence agencies.

The editor indicated that misleading reports are quite obvious and clear within those allegations as no party or any European country has declared that they seized any military equipment destined to the Great Jamahiriya.

The editor said that the Great Jamahiriya categorically denies those allegations which come within the Western media campaign of which the objectives and dimensions against the Arab Libyan people are well known as they are manipulated by Western circles.

PAKISTAN

Nuclear Program Said Progressing Without Halt

92AS0908Z Karachi JASARAT in Urdu 16 Apr 92 p 1

[News Report: "Foreign Office: 'Nuclear Program Has Not Been Set Back,' Work Continues on the Nuclear Program in Order To Fulfill the Energy Needs of the Country"]

[Text] Islamabad (JASARAT correspondent): Pakistan has said that its nuclear program has not been reversed and that work continues on the peaceful nuclear program. A foreign office spokesman said in Islamabad that Pakistan's nuclear program for peaceful purposes has not been ended; work continues on it in order to fulfill the energy needs of the country and that other benefits would be derived as well by promoting nuclear technology for peaceful purposes. The foreign office spokesman was commenting on reports regarding the halting of the nuclear program. He denied the reports and the charge leveled by senator Tariq Chowdhry. Referring to the prime minister's statement in Atak on Tuesday, he said that Prime Minister Mohammad Nawaz Sharif had rejected unequivocally any bargaining over Pakistan's national interests. It should be noted that during his tour of the United States, Foreign Secretary Shaheryar Khan had indicated that the nuclear program would be set back to pre-1990 status.

China Given Down Payment for Nuclear Plant

OW0206101092 Tokyo KYODO in English 0933 GMT 2 Jun 92

[Text] Islamabad, June 2 KYODO—Pakistan has paid China approximately 27 million dollars as a down payment for the supply of a Turnkey 300 megawatt nuclear power plant, official sources said Tuesday. Pakistan signed a contract in 1991 with China National Nuclear Corporation (CNNC) for the supply of the plant, to be installed at Mianwali in northern Punjab, about 150 kilometers north of Islamabad.

The National Assembly on Monday approved the government's supplementary budget for 1991-92 which included the provision of 693 million rupees "to meet additional expenditure on development projects of the Pakistan Atomic Energy Commission." The officials said that the amount was already paid to the Chinese company as a down payment for the plant.

Concern Conveyed to India on Agni Missile

Negative Implication Noted

BK0306144692 Islamabad PTV Television Network in English 1400 GMT 3 Jun 92

[Text] Pakistan has expressed its concern over the development of Agni missile by India. A Foreign Office spokesman said in Islamabad today the Indian action is not conducive to improving the climate of peace and security in the region. It is also against the worldwide trend of reconciliation and disarmament. The spokesman told newsmen in Islamabad today that Pakistan has conveyed its concern to the government of India over the development of intermediate-range surface-to-surface Agni missile, which has a range of 2,500 km. The spokesman expressed the hope that the international community would take due note of the negative implication of the launching of Agni missile and take effective remedial measures.

The spokesman said the prime minister, Mr. Mohammad Nawaz Sharif, is paying a three-day official visit to Uzbekistan from the 27th [date as heard] of this month. The prime minister will leave for Rio de Janeiro on next Wednesday [10 June] to lead Pakistan's delegation at world Earth Summit beginning on the 13th of this month. On the same morning, the prime minister will meet his Indian counterpart, Mr. Narasimha Rao. Mr. Mohammad Nawaz Sharif is also scheduled to meet the Chinese prime minister, Mr. Li Peng, on the 12th of this month. After the Rio summit, the prime minister will pay a five-day official visit to Britain from the 16th of this month.

Dialog Urged to Reduce Threat

*BK0306163092 Islamabad Radio Pakistan Network
in Urdu 1500 GMT 3 Jun 92*

[Text] Pakistan has expressed its concern over India's development of the Agni missile, which has a range of 2,500 km. A Foreign Office spokesman told newsmen in Islamabad today that the development of the Agni missile is not conducive to improving the climate of peace and security in the region and is against the worldwide trend of reconciliation and disarmament that is vigorously being pursued by the international community. He said Pakistan had previously proposed to the Indian Government bilateral discussions to address the issue of missile proliferation in South Asia. He expressed the hope that the international community would take due note of the negative implications of the launching of the Agni missile and take effective remedial measures.

The spokesman said that Pakistan is committed to holding a dialogue with India on lethal weapons including missiles and missile technology. The purpose of holding such a dialogue is to bilaterally reduce the threat to the region resulting from the acquisition of such weapons and technology. He listed five elements of the issue of weapons of mass destruction as biological, chemical, and nuclear weapons, missile technology, and overall conventional defense forces.

In reply to a question on whether Pakistan would like to acquire missile technology, the spokesman said that we will do everything possible to defend ourselves against any threat. On the recent diplomatic row between Pakistan and India, the spokesman said that Pakistan has proposed a code of conduct for treatment of diplomats assigned in the two countries. He expressed the hope that India will soon respond to the proposal and if the two governments agree on it, then the incidents of harassing diplomats will end soon. The spokesman clarified that the proposal reaffirms the Vienna Convention principles on diplomatic privileges and immunity and defines the rules of treatment of diplomats. The proposal also says that news correspondents, airlines officers and other such personnel should be included in this category.

Turning to the interference from across the border in Sindh and other parts of the country, the spokesman said that Pakistan will inform its friends if this interference continues unabated. He referred to the prime minister's recent statement on the subject and said that the matter has been under discussion between Pakistan and other friendly countries over a period of time. Pakistan has told India and other countries that we have evidence of such interference. Pakistan hopes that other countries can hold talks with India to put an end to such activities. The spokesman recalled that views were exchanged on the issue during the last round of the foreign secretary-level talks in New Delhi and the two sides expressed the desire to resolve the problem.

Ministry Notes India's Heavy 'Secret Dumps' in Arctic

[Dissem: 440/11]

0640 GMT, CUBA

[By HAR-LASS]

[Text] Moscow June 10 (UPI) —

Ind. int. leas. will be 100,000

Indian medium-range missiles

the Russian Foreign Ministry

[3 June]

Russian attitude is worth

does not work in the

took notice of the

"Arctic missile base"

not intend to give

adding by force

Indian government

Seizure of Uranium in Austria Reported

Russian (Riga) June 10

[AP Wire] (AP) (Riga) —

in Russian (Riga) 10

[INTERCEPT]

[Text] BBC (London)

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says that the

Russia in the

in western

[Zachvatka's (Riga) 10]

[India (Mumbai) 10]

[AP Wire] (Mumbai) 10

[Riga] (Riga) 10

[Report to S. (Riga) 10]

[India (Mumbai) 10]

[Text] Wn. (Riga) 10

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which proposes to use for civilian purposes strategic missile systems known in the West as SS-25, is currently being implemented.

The investor in this project is the I.V.K. commercial joint-stock company, and "Start-1" is being developed by the "Kompleks" scientific and technical center. The first transportable civilian multipurpose rocket complex is being created, from which launches will, in principle, be possible from anywhere. Reliable, solid fuel missiles will launch satellites with a mass of up to 350 kg into low near-Earth orbits. A demonstration launch from the Plesetsk cosmodrome has been scheduled as early as December 1992. In 1993, "Start-1" will enter the space rocket market to provide services below world prices. Instead of nuclear charges, the missiles will carry satellites for scientific research purposes, satellite communication systems, the creation of new materials and substances, prospecting for mineral resources and ecological monitoring.

Under the commitments accepted by the USSR, whose legal successor Russia has now become, 154 SS-18 liquid-fuel ballistic missiles are subject to destruction, but there are plans to use them for commercial purposes as well. A joint-stock company which is open to foreign participants, has now been organized to create "Lavochkin" technological space complexes, which will be launched into orbit by SS-18 rockets. The name "Lavochkin" honors the initiator of this project—the Lavochkin science-and-production association.

"Lavochkin" can be developed rather quickly, because the Venus landing craft will be used as its basis. It has been proposed for the "Lavochkin" apparatus to be used to produce medical preparations and extremely pure semiconductor materials. "Lavochkin" will have a strong power system for these purposes, and the absence of cosmonauts will rule out micro-gravitational disturbances.

The SALT Treaty says that long-range missiles can be destroyed [unichtozhat] through launching useful, scientific payloads. So why blow up something that can be of useful service to people? The only cause for regret now is that 700 SS-20 missiles were blown up under the terms of the treaty. If the treaty had been formulated more sensibly they could also have been utilized for civilian purposes.

Western Consumers To Use

PM2805114792 Moscow *Pravda* newspaper (Franklin Television First Program Network in Russian 2000 GMT 26 May 92)

[Video report by I. Ivanov, S. Urusov, from the "Novosti" newscast]

[Text] [Ivanov] Even not so long ago the inhabitants of the West were intimidated by SS-20 and SS-25 missiles. Then, under the treaties, they simply destroyed them. Now it has been decided to remove the deadly warheads and launch satellites for civilian use into space with the help of the rockets. This was discussed at a news conference in Moscow, where the design of Start, the first

Russian space rocket complex, was presented. Its initiator is the joint stock company IVK, and Yegor Gaydar has shown interest in the project, he has included Start in Russia's state space program.

[S. Zinchenko, vice president of IVK] So far this work, which has only just started, has enabled us to save around 5,000 jobs. The total number of personnel involved is up to 15,000. This includes the army subunits of strategic rocket forces—around 10,000 servicemen.

[Ivanov] Strange as it may seem, a spaceflight waiting line has now formed. It is made up of consumers waiting to launch their communications satellites with the assistance of the Russian rockets. Where are they from?

[L. Solomonov, chief designer] The United States, Germany, France, Britain, Brazil. All the advanced countries now need a way of ensuring that their small satellites can be sent out fairly efficiently.

[Ivanov] Incidentally, the Americans are taking \$80 million for a launch of a rocket analogous to the SS-20. Putting a payload of 1 kilogram into orbit costs around \$10,000. The participants in the news conference believe that the launching of the IVK project will finally enable us to make our conversion profitable. [video shows designs, models]

Based on SS-20 Missile

927Q0171A Moscow MOSKOVSKAYA PRAVDA in Russian 27 May 92 p. 5

[Article by A. Kostin: "Conversion. The Missiles We Are Assembling"]

[Text] We have been talking about conversion for a long time. We have been engaging in it for approximately the same amount of time. Instead of tanks we have begun to make nails, and instead of grenades, ashtrays, but nobody has been able to think of anything to do with the ballistic missiles. The presentation of the first Russian "Start-1" complex took place yesterday. The project is unique in terms of both its complexity and its purpose.

The fact is that the missile launcher was created on the basis of the SS-20, which caused a big stir at one time, and it can put into orbit a quite peaceful payload with a mass of up to 500 kilograms. It costs one-tenth as much to produce as its foreign counterparts. The I.V.K. joint-stock company, which is working on implementing the project, hopes that the series production that has now been arranged will make it possible to put the "Start-1" on the international market fairly rapidly and even significantly reduce its price.

Here one must say a few words about the I.V.K. joint-stock company itself. It has a considerable scientific-production potential. An I.V.K. plant is now going on line for producing personal computers and also electronic equipment for its own developments. In addition to this, the joint-stock company works on software processing and exporting timber materials, metal items.

energy bearers, and export-import operations, it provides marketing and transportation services, and it is developing financial and investment programs

But let us return to the missiles "which we are assembling." The "Start-1" complex is intended for putting space equipment into orbit not only from the territory of the CIS but also from the territories of other states, for example, the United States and Canada

It should be added that in all stages of the rocket they have installed solid-fuel motor components which use special fuel with a low content in the combustion products of compounds that are harmful to the environment, which provides for greater ecological safety of the launches

If you just think about this project, you will for the umpteenth time come to this conclusion: The country which has almost the greatest scientific and production potential in the world is in a state of deep crisis as usual. Perhaps we should look at the possibilities of conversion again and again, and more attentively. (Of course, without paying any attention to the innocent jokes at the beginning of this article.)

P.S. And here is also just a little bit of information exclusively for specialists

Maximum mass of payload launched into the equatorial orbit

(inclination 0 degrees, latitude of starting point 0 degrees)

Altitude of orbit, kilometers	350	500	700	1,000
Mass of payload, kilograms	500	450	380	300

Maximum mass of payload launched into polar orbit

(inclination 90 degrees, latitude of starting point 0 degrees)

Altitude of orbit, kilometers	350	500	700	1,000
Mass of payload, kilograms	300	260	200	135

CIS Adopts Agreement on Chemical Weapons

PM2205151392 Moscow ROSSIYSKAYA GAZETA
in Russian 23 May 92 First Edition p. 2

[The Agreement Among the CIS States on Chemical Weapons, adopted at 15 May session of Council of CIS heads of state in Tashkent]

[Text] The states of the Commonwealth of Independent States henceforth known as the "Commonwealth states"

Acknowledging that chemical weapons were created as part of the unified strategic potential of the former USSR in the security interests of the republics comprising it

Noting that all the facilities for storing and producing chemical weapons are on the territory of the Russian Federation

Confirming the commitments on joint participation in preparing and implementing international treaties on questions of arms cuts

Being filled with the determination to continue to act to ensure the speediest prohibition of the development, production, stockpiling, and use of chemical weapons, and their destruction, have agreed as follows

Article 1

The Commonwealth states confirm the former USSR's commitments under the 17 June 1925 Geneva Protocol

In so doing

the Russian Federation will take it upon itself to implement the commitments arising out of this protocol, while confirming the reservations about the possible retaliatory use of chemical weapons made on 5 April 1928 when the ratification document was deposited

the remaining Commonwealth states, which have no chemical weapons storage or production facilities on their territory, will consider the possibility of subscribing to the Geneva Protocol without any reservations about the right to retaliatory use of chemical weapons

Article 2

The Commonwealth states will conduct a coordinated policy in order to conclude as soon as possible a properly verifiable multilateral Convention on Chemical Weapons prohibiting at the global level the development, production, and use of chemical weapons and ensuring the elimination of all stocks

Article 3

The Commonwealth states will stand by the decision announced by the former USSR in 1987 on halting the production of chemical weapons

Article 4

The Russian Federation will commit itself to destroying chemical weapons with consideration for its real capabilities and in accordance with international agreements

The Commonwealth states will cooperate in the destruction of chemical weapons. Questions of the Commonwealth states' involvement in the specific funding of measures to destroy stocks of chemical weapons are regulated by a separate agreement

Article 5

The Commonwealth states will conduct a coordinated policy to monitor [po kontrolyu za] the export of "dual-purpose" chemicals, which are produced by industry for peaceful purposes but could be used to produce chemical weapons, and also of the technologies for their manufacture

Article 6

The Commonwealth states will consult with one another on all matters related to the prohibition of chemical weapons.

Article 7

This agreement enters into force the moment it is signed.

Done in Tashkent on 15 May 1992 in one authentic copy in Russian. The authentic copy will be kept in the archives of the Republic of Belarus Government, which will send a certified copy of it to the states that have signed this treaty.

The document has been signed by the representatives of Azerbaijan, Armenia, Kazakhstan, Kyrgyzstan, Moldova, the Russian Federation, Tajikistan, Turkmenistan, and Uzbekistan.

Ukrainian, Russian Differences 'Unresolvable'

PM2805115792 Moscow IZVESTIYA in Russian
28 May 92 Morning Edition p. 1

[Article by Viktor Litovkin: "Russia and Ukraine Continue Dispute Because of the Nuclear Button"]

[Excerpts] As already reported in IZVESTIYA (No. 122), the regular session of the Council of CIS Defense Ministers was held 26 May. Only the leaders of the military departments of Azerbaijan and Moldova did not attend [passage omitted].

It emerged at the press briefing which CIS generals held after the conference that the disagreement between the Russian and Ukrainian delegations over strategic nuclear forces stationed on Ukrainian territory had remained unresolvable. As Lieutenant General Ivan Bizhan, Ukrainian deputy defense minister, stated, Ukraine, true to its international commitments, lays no claim to the nuclear button, and strategic missiles will remain under Russia's operational command, but it does reserve the right of administrative direction of those troops.

His words provoked a sharp, albeit measured, comment from Colonel General Leontiy Kuznetsov, representative of the Russian General Staff.

"The responsibility for such awesome weapons as strategic nuclear missiles should be in one pair of hands."

What lies behind the terms "administrative and operational direction"? Ukraine thinks the decision to use strategic weapons (operational command and control) can remain with Moscow, but units of the strategic forces, while in Ukraine, should form part of its Armed Forces, and officers and men should take the Ukrainian oath of allegiance. The new intakes for such units should be made up solely of citizens of the Ukrainian state and not draftees from Russia or other CIS countries.

But that raises the question, according to Russian experts, of whose orders such strategic units would ultimately execute.

Dual command in such a serious matter, no matter what the justification, is bound to raise serious concern both here and in the international community.

Ukraine Confirms Nonnuclear Status to NATO

LD0306203492 Moscow ITAR-TASS in English
2002 GMT 3 Jun 92

[By UKRINFORM correspondent Aleksey Trotsenko]

[Text] Kiev June 3 TASS—The foreign minister of Ukraine, Anatoliy Zlenko, during a meeting with ambassadors of member countries of NATO accredited at Kiev, announced the special significance for Ukraine of the coordinated statement issued on 22 April 1992 by the NATO council in respect of the nuclear non-proliferation treaty, and also the protocol on the START treaty signed in Lisbon on 23 May 1992.

The minister handed over a note to ambassadors, in which it is emphasized that Ukraine realizes the immense threat to world peace and security posed by the process of nuclear proliferation, stands by ensurance of the universality of this treaty and joining of it by all countries. The document states that "Ukraine voluntarily concedes the right to possess nuclear weapons, which it had as one of the equal states, legal successor to the former Soviet Union. The right and the burden to possess nuclear weapons belonging to the former Soviet Union with the direct consent of Ukraine and other states, legal successors to the former Soviet Union rests with the Russian Federation, as insisted upon by it."

Ukraine has the undisputed right to receive guarantees to its national security from a possible threat of force or its use against Ukraine by any nuclear state. Ukraine hopes to receive such guarantees prior to the ratification of the START treaty and counts on support from NATO member states on this issue," the document said.

A considerable part of this important document is devoted to interrelations between Ukraine and Russia. It is in particular underscored that Ukraine can really become a non-nuclear state only when "conditions are created excluding the very possibility of launching strategic nuclear weapons against any other state from the territory of Ukraine. Ukraine will insist that in accordance with understandings achieved within the CIS framework, the Russian Federation goes ahead with the creation of a system of effective control from the side of the president of Ukraine over not using of nuclear strategic weapons deployed on the territory of Ukraine until the period of its total destruction." In order to fulfill this fully justified and very important ensurance of this international security demand, Ukraine counts on support from member states of NATO, it states.

"Ensuing from its principal stand, Ukraine cannot recognise any kind of special status for the Russian Federation in comparison with other states, legal successors to the former Soviet Union, regarding treaties, properties or pledges of the former Soviet Union. The exclusion is the understanding reached within the CIS framework regarding the continuation by the Russian Federation membership of the United Nations organization, including its permanent membership of the U.N. Security Council," the announcement emphasised.

Ukraine's Kravchuk on Weapons Destruction

OW0206204192 Moscow INTERFAX in English
1942 GMT 2 Jun 92

[Transmitted via KYODO]

[Text] The destruction of all tactical nuclear weapons in 11 Commonwealth nations will cost 150 billion rubles, and the destruction of weapons in Russian warehouses can be accomplished no earlier than the year 2000. Ukrainian President Leonid Kravchuk said in Kiev Tuesday [2 June] during a meeting with the Mongolian Minister of Foreign Relations Gombosuren

Kravchuk also said that there are 176 strategic missiles in Ukraine. In addition, aviation, which belongs to the united command of the Commonwealth, has strategic nuclear ammunition

The President said Kiev's main problem is that Ukraine, the third most powerful nuclear power in the world, is unable to attain its goal of becoming nuclear-free without outside help. 130 of the 176 strategic missiles are loaded with liquid fuel, a safe method for their destruction has not been developed. Assistance from Western nations is needed

Russia Reportedly Missing 23 Nuclear Warheads

Search Efforts Noted

LD0306093692 Moscow POSTFACTUM in English
1846 GMT 2 Jun 92

[From the "Military News" section]

[Text] Vladivostok—The chief of the Far Eastern Military District stated that the district had nothing to do with 23 nuclear warheads, reported missing in Komsomolsk-on-Amur last March. On June 2, the deputy chief of the missile troops and artillery department of the Far Eastern Military District Major-General Leonid Shvidiakov further stated to PF [POSTFACTUM] that it was for the first time that he had heard of that loss in Komsomolsk-on-Amur

As competent persons reported to PF on June 2, PF information dated 27 May, this year, published by a number of mass media, foreign ones included, on the search for 23 nuclear warheads aroused the wish of certain specialists of the RSM to look into the loss (if it

actually happened) of ammunition not relying on the good preparation in the field of nuclear armaments of the RF [Russian Federation] presidential envoy in Khabarovsk territory Vladimir Desyatov, who had made the data on the loss of the ammunition public and allegedly was personally making a search for it

PF has gleaned from sources close to the nuclear weapons in the Far East, that, according to all the indices, the nuclear warheads belong to the navy, which has been responsible for their security. The same sources reckon that the warheads are likely to be part of the armaments of the unfinished nuclear submarines at Leninskiy Komsomol shipyards and should not have been stored in Komsomolsk-on-Amur

Official Denies Losses

LD0306103992 Moscow ITAR-TASS in English
1022 GMT 3 Jun 92

[By ITAR-TASS correspondent Roman Zadunayskiy]

[Text] Moscow June 3 TASS—"Not a single case has so far been recorded of nuclear weapons, belonging to the CIS Joint Armed Forces or the Russian Army, being lost. Every type of nuclear weapon is registered per piece and kept in specially equipped and guarded storehouses." ITAR-TASS was told today by an official of the Russian Defence Ministry's press centre

The official said that some means of mass information continue to publish reports directly or indirectly claiming that some nuclear weapons, belonging to the Russian Army or the CIS Joint Armed Forces, have been lost. Thus, the newspaper "VECHERNYAYA MOSKVA" recently published a report on the disappearance of 23 nuclear warheads, which allegedly vanished from one of the Far Eastern arms depots this March

The official denied reports that the South Ossetian leadership possesses nuclear weapons by saying that there were no such arms in South Ossetia or in Transcaucasia as a whole

Reports Continue

PM0406135192 Moscow KRASNAYA ZVEZDA
in Russian 4 Jun 92 p 1

[Russian Ministry of Defense Press Center report "Returning to the Subject of the 'Leakage' of Nuclear Weapons"]

[Text] Reports continue to appear in certain mass media directly or indirectly confirming alleged cases of the loss of nuclear weapons belonging to the CIS Joint Armed Forces and the Russian Army

Thus, on 29 May of this year VECHERNYAYA MOSKVA published a report which spoke of the sale of 23 nuclear warheads at one of the Far East military arsenals in March of this year. On 2 June the Vesti news

program (Russian Television), and on 3 June NEZAVISIMAYA GAZETA circulated another "sensational" piece of news: The South Ossetian leadership has nuclear weapons in its possession and is prepared to use them for the purposes of defending the republic.

According to reliable data, the CIS Joint Armed Forces High Command and the Russian Ministry of Defense have not recorded a single case of the loss of nuclear weapons. They are all strictly recorded by the piece and reliably guarded in specially equipped stores. The Russian Army has no nuclear weapons in South Ossetia or indeed in the Transcaucasus at all.

Russia Denies 'Sensational' Reports on 1976 Crash

PM0106154192 Moscow KRASNAYA ZVEZDA
in Russian 26 May 92 p 3

[Russian Federation Defense Ministry Press Center report: "Nuclear Bombs Stored Reliably. No Cases of Losses"]

[Text] On 12 and 14 May this year IZVESTIYA (Nos. 110 and 112) published "sensational" articles on the alleged 1976 crash of a Soviet strategic bomber in the Sea of Okhotsk. As a result of the crash, the articles claimed, two nuclear bombs were lost and were subsequently fished out of the sea by the Americans and the Japanese. The CIS Joint Armed Forces Press Center sent the IZVESTIYA Editorial Office 15 May a document officially refuting the reported loss of nuclear munitions. Given that the newspaper has not yet published this information and that the public, as IZVESTIYA put it, is unclear as to "just where the two Soviet nuclear bombs went," it is necessary to reiterate that neither in 1976 nor before or since this year have our strategic bombers flown on combat alert duty with nuclear bombs on board, nor do they do so at present. All nuclear munitions for the Air Force are held in reliably protected installations which are specially equipped for this purpose. Any work to fit such munitions to aircraft in peacetime, even for exercises, is categorically forbidden. This rule is unswervingly observed.

N. Ossetian Deputy on Presence of Nuclear Arms

92P50117A Moscow NEZAVISIMAYA GAZETA
in Russian 23 May 92 p 1

[NEGA item: "Nuclear Weapons in North Ossetia"]

[Text] Soltan Kalitsov, a retired major general and deputy in the parliament of North Ossetia, declared at a session of the Supreme Soviet that strategic nuclear weapons of the former Soviet Army are based on the territory of North Ossetia.

South Ossetian Use of Nuclear Arms Questioned

Defense Ministry Denies Reports

LD0206195892 Moscow Russian Television Network
in Russian 1900 GMT 2 Jun 92

[From the "Vesti" newscast]

[Text] In our evening "Vesti" bulletin we quoted the NEGA agency report on South Ossetia Prime Minister Oleg Teziyev saying he does not exclude the possibility of the use of nuclear weapons by the Tskhinvali authorities for defense purposes. We have just been informed by the press center of the Russian Ministry of Defense that, according to reliable information from the Chief Command of the CIS Armed Forces, there are no nuclear weapons in South Ossetia nor in the Transcaucasus in general. Every such item is being kept under strict control and being securely guarded at specially equipped storage facilities. Not a single case of their loss has ever been recorded.

Teziyev Cites 'Rumors'

LD0306182192 Moscow Russian Television Network
in Russian 1600 GMT 3 Jun 92

[Video report by V. Vinogradov from South Ossetia, including recorded remarks by Oleg Teziyev, chairman of the South Ossetian Council of Ministers, from the "Vesti" newscast]

[Text] The situation in South Ossetia still is causing concern, and the report about nuclear weapons in the area, with which the South Ossetians are planning to threaten their neighbors, has aggravated the situation further. In order to get to the bottom of this situation, Vesti has spoken to Oleg Teziyev, chairman of the South Ossetian Council of Ministers. He has confirmed that he has made no mention of this in his speeches for two weeks.

[Teziyev] It is possible that some of our supporters, either with the worthy aim of comforting themselves or with a provocative aim in view, are circulating these rumors.

[Vinogradov] According to Teziyev, the situation is complicated further by the fact that the Transcaucasus Military District has handed over a large consignment of weapons to the Georgian armed forces. Given the conditions that Eduard Shevardnadze has not yet fully gotten to grips with in the situation around Tskhinvali or to be more precise, is not in control of the armed formations shelling South Ossetia, this is leading to a further escalation in the conflict. Teziyev confirms that the requisite desire for peace does exist in South Ossetia.

[Teziyev] We want to put a stop to military actions today, without postponing it for one minute, and we will cease our military actions under the conditions of a mutual agreement being reached.

Plays 'Trump Card'

PM0406122592 Moscow KOMSOMOLSKAYA
PRAVDA in Russian 4 Jun 92 p 1

[Report by A. Kirichenko and S. Sokolov "Nuclear 'Ace' or Bluff?"]

[Text] Despite the categorical denial from the Defense Ministry, the South Ossetian leadership is continuing to confidently assert that it has nuclear weapons at its disposal. Admittedly, in the week since the first report on this subject, the supposed atom bomb has undergone a substantial modification, changing from a "geological-type nuclear weapon" into a "nuclear device with a non-series type charge."

"Everything at our disposal will be used only in the event of our people being threatened by destruction," says Tskhovvali is seized. South Ossetian Prime Minister Oleg Tertzak said in an interview with KOMSOMOLSKAYA PRAVDA.

Whether or not South Ossetia has the bomb will be clearer in military emergencies, but at any rate Tertzak's trump card has worked. The international situation would be reset on the region.

Condemns Russian Intervention

MA040610092 Moscow NAKHICHIVANSKAYA PRAVDA
in Russian 4 Jun 92 p 1

[Report by Alan Kasarov under the "South Ossetia" rubric. "Nuclear Threat From Tskhovvali: South Ossetian Premier Promises To Open Second Front Against Russian Arms Subsidies"]

[Text] South Ossetian Prime Minister Oleg Tertzak has resolutely condemned the entry (invasion) of Russian Army assault troops into the territory of the CIS Army's frontiers and readiness to resist them in the Tskhovvali region. He said that this constitutes an extension of the policy of attacking the Chechen people which has been pursued by the Russian leadership over the last few months. Tertzak thinks that, unlike in Sharjimatlan, the Chechen Republic, where Chechen (chairman) will defend the Chechen people, in the Tskhovvali, much less the Russian people and people of the Russian Army, who are being supplied by the Georgian troops, as they have already been taking part in the fighting against the South Ossetian leadership has international relations. If this—the South Ossetian people and armed forces will respond immediately. The premier said, "we have arms that have not yet been brought into use, and we will take all possible steps as defense measures. When asked about the truth of the recent statement by Alan Tskhovvali, one of South Ossetia's leaders, regarding the possibility of using the Tskhovvali authorities nuclear weapons, Oleg Tertzak confirmed this information, adding that it is a matter of multi-stage (strategy) of nuclear weapons."—NACHIVANSKAYA PRAVDA

Military Chief Rejects Nuclear Claim

LD0406190892 Moscow Mavro Radio Network
in Russian 1510 GMT 4 Jun 92

[Report by IPRINDA correspondent Sorab Djalil]

[Text] The Georgian press today published the resolution on the Georgian parliamentary elections which will take place on 11 October this year. Sixty-nine deputies will be elected to the supreme legislative body of the republic for a period of three years. The elections are being held by multi-mandate constituencies using the system of proportionality and on the basis of valid transferable votes.

What percentage of the electorate takes part in the elections is of no significance with regard to recognizing the legality of the future elections, since the system under which they will be held guarantees the election of the necessary number of deputies.

Parliamentary deputies will not have the right to hold official posts of responsibility or to engage in any other permanent and paid work. An exception has been made only for the prime minister, who at the same time may be also a member of parliament.

Another theme to which the republic's public is devoting a great deal of attention is the development of events in the conflict zone. Colonel Dolgachev, chief of the Transcaucasus Military District Press Service, told the IPRINDA press correspondent today that the statement by the Ossetian militants, alleging that they possess nuclear warheads, does not correspond with reality since there are no nuclear warheads on the territory of the Transcaucasus. He added also that even if the statement by the militants were true, nevertheless, without the necessary launch installations, which they certainly do not possess, it is impossible to activate a nuclear warhead.

The IPRINDA press correspondent has learned from Tskhovvali that the evacuation of the families of servicemen from that region is proceeding according to plan without incident. At present, a plan for the withdrawal of the most officers and warrant officers has been drawn up, which it is thought will begin after the Georgian battle has been exhausted.

Byelarus' Withdrawal of Strategic Arms Exed

LD0406181192 Moscow TASS in Russian
1740 GMT 2 Jun 92

[By BELTA correspondent Tatiana Aleksandrovna TASS]

[Text] Minsk June 2. TASS—"The Republic of Byelarus is ready to join the treaties on non-proliferation of nuclear arms and limitation of conventional armaments in Europe." Chairman of the Byelarusian Parliamentary Commission on National Security, Defense and Arms Control Activity Mykhaila Gorbunov, President William

Potter from the U.S. Monterey Institute of International Studies, Center of Russian and Eurasian Studies.

Potter, who heads the center, is currently on a working visit to Byelorussia.

Grib expressed the assurance the Byelorussian parliament will ratify the international treaties at its regular session in fall.

"The final aim of Byelorussia is to become a non-nuclear and neutral state. Our principled stand on this issue will not be changed. It reflects the point of view of the government, the parliament and the republican public," said Grib.

"Tactical nuclear arms have been completely withdrawn from Byelorussia. Strategic arms wait for their turn, the time of which depends on Russia, whose territory accommodates the only enterprise eliminating nuclear charges.

"The approximate term of strategic arms withdrawal is seven years. It could be less if not for the difficulties created by holding of the economic reform and creation of the national armed forces. In addition, Byelorussia lives under special conditions caused by the Chernobyl accident.

"Nevertheless, the Supreme Soviet keeps to the opinion one cannot gain political dividends from keeping strategic nuclear arms," said Grib.

Professor Anatoliy Volkov, director of the Byelorussian Scientific and Technical Center—The Institute of Radiation Safety Belrad, called attention to the fact peaceful nuclear uses are as dangerous for people as military ones.

"The Chernobyl accident is a vivid example of it. A total of 121,000 square meters of land fell out from economic circulation for a long time due to the radiation impact. Seventeen million people, including every fifth Byelorussian, children are no exception, still live on affected territories in Byelorussia, Ukraine and Russia," said Volkov.

He stressed only efforts of the entire international community can combat the aftermath of the major 20th century nuclear catastrophe.

In his turn, Potter stressed the United States will welcome any steps of Byelorussia, if it is the first among the CIS states to ratify the above-mentioned international treaties on nuclear arms and conventional armaments in Europe. He assured Byelorussia will receive the most favored nation status on the part of the United States in the development of the economy, science, conversion and the solution of Chernobyl problems.

Unfortunately, they in the United States know little about Byelorussian problems, said Potter. He believes he will help Americans see the problems and troubles of Byelorussians.

Uzbek President Issues Ukase on Nuclear Center

Text of Ukase

925D0434A Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 16 May 92 p. 1

[Ukase Issued by the President of the Republic of Uzbekistan: "On a National Nuclear Center and Atomic Energy Agency for the Republic of Kazakhstan"]

[Text] In connection with the closing down of the Semipalatinsk nuclear testing grounds and in order to develop and effectively utilize the Republic of Kazakhstan's scientific, technical, and industrial potentials for atomic science and technology, I hereby decree the following:

1. In order to carry out projects with regard to radiation safety and ecology, research on the problems of utilizing and burying radioactive wastes, as well as developments in the field of nuclear technologies and nuclear-power engineering, a National Nuclear Center for the Republic of Kazakhstan shall be established, based at the complex of the former Semipalatinsk Nuclear Testing Grounds and at appropriate scientific organizations and facilities situated on the Republic of Kazakhstan's territory.
2. In order to implement state policy in the field of using atomic energy, an Atomic Energy Agency for the Republic of Kazakhstan shall be formed.
3. Within the limits of the functions assigned to it, the Atomic Energy Agency for the Republic of Kazakhstan shall adopt decisions binding upon all ministries, departments, enterprises, organizations, and other economic-type facilities within this republic, regardless of their departmental subordination and forms of property ownership.
4. The Republic of Kazakhstan's Cabinet of Ministers shall perform the following actions:
 - implement organizational measures with regard to creating the Republic of Kazakhstan's National Nuclear Center and the Republic of Kazakhstan's Atomic Energy Agency;
 - provide for and ensure the approval of the statutes regarding the Republic of Kazakhstan's National Nuclear Center and Atomic Energy Agency.

[Signed] N. Nazarbayev, president of the Republic of Kazakhstan

Alma-Ata, 15 May 1992

Commentary on Ukase

925D0434B Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 16 May 92 p. 1

[Commentary by G. A. Abilseitov, minister of science and new technologies]

[Text] A KazTAG correspondent asked G.A. Abilsitov, minister of science and new technologies, to comment upon this Ukase.

"Kazakhstan possesses significant scientific, technical, and industrial potentials for conducting research and development connected with the utilization of nuclear technologies in the interests of industry, electric-power engineering, health care, and other sectors of the national economy," said Galym Abilsitovich. "Our republic engages in mining and processing uranium ores, produces fuel components for the heat-emitting elements, and is mastering a number of industrial technologies which utilize nuclear power. In atomic science and industry Kazakhstan employs a large number of highly skilled scientists and specialists, among which are more than 20 doctors of sciences and 100 candidates of sciences."

"In connection with the cessation of nuclear-weapons testing at the Semipalatinsk Testing Grounds and the change in the regime of secrecy encompassing the experiments being conducted there, a possibility has opened up for combining the following entities within the framework of our sovereign state: the existing scientific and technical personnel staffs and the material and technical base. We could also use them in a targeted and purposeful way for the development and practical mastery of nuclear technologies. The president's Ukase on establishing a National Nuclear Center and forming an Atomic Energy Agency for this republic constitutes a favorable foundation for implementing these possibilities."

It is assumed that the activity of the Nuclear Center will be concentrated on the following main lines: radiation ecology; the study and elimination of long-term consequences of nuclear explosions in the region of the former Semipalatinsk Testing Grounds; increasing the reliability of nuclear-power plants and solving the safety problems of nuclear-power engineering; utilizing radioactive wastes; developing and mastering nuclear technologies, including those involved in the entire cycle of civil nuclear-power engineering.

A national program of research and development is now being formed in the field of nuclear-power engineering. It will also define and specify the sphere of use for nuclear power in the interests of the national economy. This program is counting on a broad-based international cooperation and is keyed to a further development of scientific, technical, and production ties with the appropriate organizations of the Russian Federation as well as those of other CIS countries."

Nuclear Collective Reported Under Threat

PM0206153992 Moscow ROSSIYSKAYA GAZETA
in Russian 30 May 92 First Edition p 4

[Unattributed report. "Possibilities and Financial Bankruptcy"]

[Text] Russia deserves to be among the leading powers with a high scientific potential. Its nuclear reactors

institute in the Volga city of Dimitrovgrad meets contemporary international standards. The members of a technical committee working for four days in the Central Volga region of Ulyanovsk Oblast under the aegis of the International Atomic Energy Agency [IAEA] came notably to this conclusion.

It is particularly paradoxical that today the collective of the nuclear reactors scientific research institute, which was the subject of such flattering comments from foreign scientists, bears the burden of undeserved financial adversities. Resources are not being allocated for scientific experimental programs. Its core of highly qualified specialists, which has formed over a period of 35 years, may find itself without any work through no fault of its own. But is it possible for such a thing to happen? The Dimitrovgrad nuclear workers have no answer to this question as yet, although they did not damage the honor of Russian science when worthily receiving the earth's leading nuclear scientists under the auspices of the IAEA.

Debate Over Nuclear Arms on 1974 Otvazhnyy Ship

Nuclear Warheads Suspected

LD0106150692 Kiev UKRINFORM in Russian
0839 GMT 1 Jun 92

[By UKRINFORM correspondent Sergey Balykov]

[Text] Kiev, 1 Jun—The large anti-submarine ship "Otvazhnyy" which sank in August 1974 near Sevastopol might have had torpedoes with nuclear warheads on board, according to a report in the republic's general political newspaper PRAVDA UKRAINY, citing information received from the international organization Greenpeace.

The paper publishes private archive photographs recording the loss of the "Otvazhnyy", which left the Bay of Sevastopol as part of a squadron of warships and suddenly caught fire. There was virtually no rescue operation, the paper reports.

Naval Chief Denies Reports

LD0106170792 Moscow ITAR-TASS in English
1535 GMT 01 Jun 92

[By ITAR-TASS correspondent Andrey Naryshkin]

[Text] Moscow June 1 TASS—There were no nuclear armaments on the "Otvazhnyy" big anti-submarine ship which sank not far from Sevastopol, in the Black Sea, in August of 1974, Vladimir Lyashenko, first deputy chief of staff of the CIS Navy, told TASS on Monday [1 June]. He denied reports of the "PRAVDA UKRAINY" newspaper which quoted Greenpeace as saying there were several torpedoes with nuclear warheads on the battleship.

Lyashenko said there were five torpedoes, but none of them had a nuclear charge. The torpedoes and other potentially dangerous armaments of the sunk submarine Chaser were destroyed by the Black Sea naval units, he added.

Computer 'Sabotage' Suspected at Ignalina Plant

92UN14744 Moscow LITERATURNAYA GAZETA
in Russian No 23. 3 Jun 92 p 12

[Article by correspondent Tatyana Yasinskaya: "Saboteur Savchuk: Encroaching Upon the Safety of the Ignalina Nuclear Power Plant"]

[Text] Here is what basically happened. In late January of this year Oleg Savchuk, a programmer for the Ignalina Nuclear Power Plant who allegedly interfered in some particular way with the computers controlling the work of the reactors, was "nabbed with a smoking gun." Savchuk was immediately fired on the basis of the conclusions of an official investigation carried out by the station's workers. "For exceeding official powers," read the conclusions. A couple of days later the police, who announced an indictment of premeditated sabotage and searched the suspect's apartment, took Oleg to prison.

That is where he has been since then. He has not admitted his guilt. The maximum time of preliminary confinement has expired, but the investigation into the case has not yet ended.

Now about the "malefactor." Oleg Savchuk came to the plant 10 years ago. The young, talented programmer was lucky enough to be at the inception of an important project. They were creating the "brain" of the plant—the first information and computer system, with unique attributes: The Titan ICS. During those times they were at the plant literally night and day. Titan, which had been conceived and developed by "egg-heads" in high-security institutes, exhibited so many "rough spots" here locally that in the unanimous opinion of the programmers it was like rough-cut boards. Each board still had to be planed smooth and fitted to the specific intermingling of peculiarities and numerous imperfections of the nuclear power plant itself.

But in the way things happen so often in our country, the cart was put before the horse: The ICS was put into operation three years after the nuclear power plant was itself put on line. Is it any surprise, then, that since that time the system, which consists of approximately 90 computers, has been undergoing continual modification, and that the list of defects discovered in it is still being added to today?

In the beginning, everyone fought together, step by step, for Titan: It was their brain-child, carried through many sleepless nights of suffering and delivered at the price of truly titanic exertion of mind and will (while it was far from the most sophisticated, they did manage to create the best system in the Union): "We will not sign off on it until these certain things are finished." In the meantime the management was applying the usual pressure: "Come on, let's go! Let's sign off on it, and then later—honest!—we will get the bugs out...."

Those who could not resist finally signed the papers. Others refused to give up, and left for another department, or away from the plant altogether. Savchuk alone stuck like glue, continually working on the same old "rough spots" still in Titan. Realizing that it would be impossible to pry this eccentric away, the management simply whited out his name from the relevant pages of the sign-off document.

Investigating the causes of recurring failures of the system or finding still more weak spots in it, Oleg—sometimes alone, sometimes with coworkers—passed highly detailed official memoranda "upstairs" with proposals on what to fix or replace. The management accepted the papers, occasionally with words of gratefulness spoken through gritted teeth, but did not do a darn thing. Oleg wrote more memos and addressed them to the next higher rung. So, persistently, rung by rung, up to the plant director, and even the State Nuclear Power Inspection Agency. He climbed this ladder ten to twenty times a year, as we now have learned.

There was one other means of attaining introduction of the urgent developments. On becoming persuaded that the management was reluctant to take responsibility for anything, the programmers illegally tested their innovations, and if they worked, presented them as finished results. Approvingly or reluctantly depending on the scale of the success, the management sanctioned the now fully tested actions with its lofty signature. Without tiring the reader with the technical details, let me say simply that Titan was enriched many times over in this fashion.

"With time, computers require more and more repairs," explained programmer Andrey Zuyev, an associate. "But no one has been using or manufacturing such computers anywhere in the world for the past 20 years. Could the obsolete computers be replaced with new ones? I would not attempt to even start doing so for less than \$3 million. I already added it up. But judging from world experience, in principle plants such as ours should not be operating. The Leningrad Nuclear Power Plant is in an even worse state. I know that for a fact, not just from rumor...."

There were few who could rival Savchuk in his knowledge of all of the system's flaws—one way or another he personally developed many of its important units. Although by general admission he was never communicative or "sociable," people raved about his work. The "quiet genius" was what they called him behind his back. Being naive, he never suspected what his zeal would cost him. It was precisely the highly detailed, almost daily notes from Savchuk regarding all of the problems, failures and turns in the life of Titan—these meticulously pondered and carefully preserved diaries—that became practically the only (!) documents in the hands of his accusers, incriminating him—Savchuk—of many years (!!!) of sabotage....

This would be a good time to recall that the Ministry of Medium Machine Building, the now-abolished "chief"

of the country's nuclear enterprise, had sprung forth from Bera's infamous domain. It glomed in it closed cities, including those near nuclear power plants. Like Sneckus at the Ignalina Nuclear Power Plant, like Chernobyl's Pripyat, like Sosnovyy Bor at Petersburg, and a dozen others. These are extremely well-provided towns of thousands of inhabitants, but usually behind barbed wire and a ring of ever-watchful security. Here people do not have their names on waiting lists for housing for decades, and they do not roam the stores in the vain hope of finding something to buy. There is always much more food available here, the industrial goods are better, the homes are more spacious, the hospitals are cleaner, etc. "It is almost like living abroad," boast the closed-city citizens. The barbed wire—well, it is not all that bad, depending on the side from which you look at it: It keeps the competition for the sausage out. And the closest relatives do have the occasional opportunity to visit for a week by special permit. In short, it is a paradise behind barbed wire. This "paradise" is usually ruled by some local prince representing the medium machine-building ministry. Not at all a place for democracy, dissidence or principles of any kind!

"I am absolutely certain," said Anatoliy Ogiyenko, who worked many long years in the nuclear safety department of the Ignalina Nuclear Power Plant, "that had an operator at that block control panel of the Chernobyl Nuclear Power Plant said 'no' to that chief engineer or chief who gave the wrong instructions, the Chernobyl disaster might never have occurred, but doubtlessly the operator would have suffered—up to the point of dismissal. If he loses his place in a closed city such as this, where is he to go from here? So when you get right down to it, it is better to keep your mouth shut."

But not all kept their mouth shut. "Popular disturbances" have arisen about every half year in the last several years in that same brain center of the Ignalina plant, where almost all of the computer equipment is concentrated. Meetings, group petitions submitted "upstairs" demanded removal of the immediate supervisor of the computer operation—shop assistant chief A. Myshko. Upon investigating the conflict, again and again the management promised on a stack of bibles to fire Myshko, but he stayed on as if nothing ever happened. Moreover he had more than enough ways at his disposal to put the screws to the instigators of the disturbances.

Zuyev left the plant, and so did some other friends and associates. By May of last year Savchuk was left at his work station in complete professional, intellectual and social isolation. When a nervous rash spread over the face and arms of this physically fit, athletic individual, when he forgot about all of his former diverse interests and hobbies, and focused himself completely on one subject—Titan and Myshko, he was given some advice by his close friend Anatoliy Ogiyenko: "Get away from here fast. None of this is going to end well." He could see the handwriting on the wall...

A tumultuous transition to the marketplace began at the Ignalina Nuclear Power Plant as everywhere else in the country. Before the programmers could gather their wits people began selling their inventions right and left behind their backs—inventions that had been moved with so much difficulty along the lawful path of realization. The computer programmers tried to stand up for their rights, but without success. The leader of this "untamed capitalism" was, of course, Myshko. Dozens of people took part in it, including the current plant director, K. Khromchenko. Only Savchuk and some other uncooperative souls were excluded from the business—they were a little too obstinate.

Of course, the instigators of the "Savchuk case" had not expected a commotion to arise about it. Had the same method been not used many times before to get rid of such people from the station? By the end of January, changes at the nuclear power plant overtook the market games, however. The Lithuanian National Security Service took the plant under its care, replacing the vanquished KGB. It would have been sinful to miss this chance for distinguishing itself in its new pursuit. Government dispatches began flying, handcuffs clicked, and the long-forgotten word "saboteur" flashed through the newspapers.

"I learned what happened from the morning newspapers," Lithuanian Republic Minister of Energy Lyaonas Ashmantas sympathized. "Many injustices had already occurred in the Ignalina story, and unfortunately this was not the first case of the government's gross, incompetent interference in the affairs of the energy department, which is working feverishly to set things straight even without such interference."

It was just yesterday that members of Lithuania's Green Party lay down side by side around the station, picketing the entrances and exits and accusing nuclear power plant workers of trying to do no less than "destroy the nation." "As if they cannot see that these people—who are working selflessly with far from perfect equipment, are risking their heads and the lives of their own children," Algirdas Stumbras, the chief engineer of Litenergo, elaborated on this issue that just will not go away. "They should be thanked, and supported in every way possible. Especially now that Lithuania is left with only one product that meets world standards. It is not meat, or cheese, or television sets—it is electric power!"

With the restoration of the Lithuanian state, many of the inhabitants of Sneckus, hurt by the wrongful accusations of certain national-radicals, would have eagerly gone back to Russia. "We were prepared to build housing anywhere in Russia for those who would leave," said L. Ashmantas, "as long as they moved quietly and honorably. We did not want to hurt anyone. But things did not turn out right. The motherland began its program of conversion, it began shutting down operating facilities and halting construction of new ones, and it no longer needed so many specialists. Such that the upshot is that the responsibility for taking care of them, for integrating them into our state—the overwhelming majority of the

nuclear power plant workers had become full-fledged citizens of Lithuania—fell entirely upon us. Then to make things worse, there was this campaign around Savchuk."

The examining magistrate threw out the first independent expert examination of the Savchuk case on the grounds that the experts knew Savchuk personally. But this was quite natural: Specialists of this level in all of the former USSR could be counted on the fingers of your hands. How were they not to know one another?!

When his wife (also a programmer by the way, who never was allowed to see the case file) asked how long they were intending to keep the accused confined, the examining magistrate answered shortly: "Until he confesses." Savchuk was assured of the same thing. The dialogue with him goes something like this:

"Do you confess your guilt?"

"No."

"Are these your papers?" (They show him the archives.)

"Yes."

"But you keep saying you are innocent nonetheless. Go sit down and think about it some more."

Thank God that the "Russian card" has not been played yet in any way in this matter. As it turns out, no matter how competent the investigation into the nuclear computer cases might have been—unfortunately specialists are being denied any assistance for the moment—it is obvious that any of Savchuk's associates might have been in his place. What was more vulnerable was not the person himself but the place to which he applied his effort. Anyone could have lost equilibrium here. Oleg just happened to be the one. Such that besides concern for his fate, there are questions that are broader and deeper than those of the individual. We cannot avoid the principal object of concern, one which revealed itself so fully in this story: What is the place of the individual in this explosive field of nuclear power engineering?

The "tamers of the atom" have a vital need for tranquility and equilibrium as the conditions of maximum concentration. That is not a whim—it is something akin to the categorical "Silence! Surgery in progress!" On the other hand, deliberately exerting psychological pressure, and interfering hastily and incompetently in such an extremely complex field is out-and-out suicide. In the Chernobyl version, as I remember, the defendants also included "extremists," elevated to the rank of something close to malefactors.

There is one other guarantee of our common, universally desired safety: the right to a kind of intellectual opposition, the definite legal right of enquiry, and, paradoxical as this may seem, the right to make mistakes. After all, if we were to approach the incident at the Ignalina Nuclear Power Plant from a purely technical point of view, then

Oleg should have been joined in prison by several dozen other people who were forced, more than once and out of extreme necessity—due to a breakdown or a non-standard situation—to opt for the riskiest experiments. Yes, not always successful. How would you go about testing new developments, finding alternative solutions, working, and experimenting? By the way, the Titan ICS possesses triple redundancy, which makes it possible to conduct research without danger to the primary system. If we could only restructure or, more precisely, reorient the administrative system in this way to the interests of living people, to respect for their honor and worth, to trust in their knowledge and abilities.... In short, so that it would not suffer a paranoid fear of saboteurs concealing atomic nuclei on their persons.

NATO Reportedly May Resort to 'Nuclear Flogging'

*PM2805124392 Moscow PRAVDA in Russian
28 May 92 p 1*

[Report by Viktor Linnik: "Unremitting Nuclear Thirst"]

[Excerpt] Yet another sensational scandal...NATO's new strategy, which permits a first use of nuclear weapons, has been published. The document confirming this was passed to REUTER by persons "committed to active public discussion of the issues treated in it."

It was adopted in December last year by the NATO countries' ministers of defense, immediately following the USSR's collapse on a heady wave of sovereignization. Here are the most noteworthy excerpts from it: "NATO is now threatened by a danger stemming from instability in a whole series of regions, including the territory of the former Soviet Union and the Near East...NATO may review the question of the selective use of nuclear weapons with the aim of ending military conflicts." The idea is to use nuclear aviation bombs or sea-launched missiles because, the document says, the capabilities of conventional armed forces could prove insufficient to repulse an aggressor's attack.

Translated from military-political gibberish into ordinary human language, these words say simply: If anyone in the republics of the former USSR misbehaves, then the stern NATO uncles can, if necessary, resort to the nuclear flogging of the naughty pranksters. Since there is no noticeable shortage of "naughty kids" on the territory of the former USSR today, the reader is free to draw his own conclusions.

So, our new "partners" in the West, absolutely incapable of evaluating the rare spiritual nobility of the new generation of Christ-loving rulers in the CIS, are presenting us with one surprise after another. But are they surprises? The Russian president is targeting our nuclear missiles away from the United States (true, without specifying on whom they are now targeted). But the United States does not even entertain the thought of responding in kind, and is still setting its nuclear sights at

the Kremlin and Staraya Ploshchad, as if Brezhnev, the superannuated leader of the "evil empire," was still there with his young protege Gorbachev. Bakatin hands over to his friends a unique bugging system—the Americans were plunged into such bewilderment that they did not even offer thanks for such a generous present. Their only response to this princely gesture was to "forget" through

a blunder about their submarine in the Barents Sea. Back in the spring of last year the U.S. press published plans for armed intervention in the CIS hot spots—in case the people there really begin to get out of hand. Then it was a question of using conventional armed forces. And now, it turns out, the nuclear bomb may also be entirely suitable. [passage omitted]

AUSTRIA

Police Make Arrests in 'Major' Seizure of Uranium

AU0406071992 Vienna KURIER in German
4 Jun 92 p 5

["Exclusive" report by W. Theuretsbacher: "Vienna: Center for Nuclear Terrorists"]

[Text] For a long time it was only suspected; now it has been proved. Vienna is an international center [Drehscheibe] for smuggling nuclear material from the former Soviet Union. Members of the Austrian antiterrorist unit seized parts of reactor fuel rods containing uranium, which members of the Eastern mafia wanted to sell to Arab countries. This is the first successful seizure anywhere of major amounts of radioactive material.

On Wednesday [3 June] undercover agents of the "Antiterrorist Task Force" (EBT), supported by uniformed Vienna police officers, approached a parking lot near Praterstern Square in Vienna. Seven people—one Austrian, two Czechs, and four Hungarians—suddenly found themselves wearing handcuffs.

At issue were metal disks weighing 1.2 kg which were carried in a traveling bag as carelessly as a brown bag lunch. A speedy analysis at the Seibersdorf Reactor Center confirmed suspicions. The material included 261 so-called "UO₂-pellets" containing 4.4-percent Uranium 235, and another 55 grams of pure Uranium 235. These are highly radioactive fuel rods from a nuclear reactor of the "WWR-1000" type.

The security authorities have imposed a news blackout and hardly any details have been announced. The background of the matter is "organized crime." The people in custody are simple criminals. One was driving a stolen car. Via contacts with the Russian mafia, the criminals were probably able to get access to the former Soviet nuclear storage sites. It is known among Western intelligence services that parts of the KGB, which has been disbanded, have been reorganized along Mafia-like lines and are very active in the nuclear field.

The people in custody have violated several Austrian laws and face prison terms of up to three years. They also endangered their lives with their idiotically careless transportation of the highly radioactive substances.

The smugglers had been circulating separately in Vienna for several days. They were looking for Arab customers, and for this Vienna is a good international meeting place. Obviously their activities were monitored by the antiterrorist squad. When the group met on the parking lot near Praterstern Square, the authorities acted. Understandably, the Interior Ministry is not providing any details on how all this happened, but only that it was successful action by a special task force for combating "organized crime," a task force that has been organized in line with new requirements.

The arrests and the impoundment of nuclear material shed new light on the international discussion about the suspected sale of radioactive material from the Commonwealth of Independent States republics to the Third World. Battalions of dubious businessmen from all over the world are currently trying to get access to the Russian "bomb." There have already been a number of arrests in Italy and Switzerland. The material impounded in these cases was mostly of lesser quality and the perpetrators could be charged only with fraud.

Radioactive screws turned up in Austria, which interested people paid a lot of money for. Upon more careful analysis, however, it was found that the screws came from Russian fire-alarm equipment and contained minimal traces of plutonium, which proved useless.

Another very popular substance is the so-called "Red Mercury." It is a particularly heavy, red form of mercury. It is said to be radioactive and used as a stabilizer in Soviet missile warheads. Whether they be mafia members or intelligence operatives, they are all hunting the mysterious substance and they pay lots of money for samples. No one has seen this phantom substance, however.

Therefore, the operation by the Vienna police is of international significance. Now we have the final proof that criminal associations are indeed able to get access to high-quality radioactive material. This is no surprise—the new republics need lots of money.

GERMANY

Kinkel, Turkish Counterpart Communicate on Arms

LD0306201792 Berlin ADN in German 1407 GMT
3 Jun 92

[Text] Bonn (ADN)—Government Spokesman Dieter Vogel confirmed in Bonn today that Foreign Minister Klaus Kinkel (Free Democratic Party) has exchanged letters with his Turkish counterpart on the resumption of German arms deliveries to Turkey. The deliveries were stopped after it emerged that the weapons were being deployed against the Kurds.

Foreign Ministry Spokesman Hanns Schumacher stated that in his letter Kinkel referred to the fact that within the framework of defense cooperation arms deliveries from the Federal Republic are only provided for NATO defense purposes. The Turkish side accepted this without reservation but drew attention to the fact that the NATO strategic plan adopted in November says that terrorist attacks also endanger the security of the alliance. Schumacher emphasized that this is not a case for the alliance.

There was strong criticism from the Party for Democratic Socialism (PDS) group of deputies and from the Greens regarding the government's plans to resume arms deliveries. Speaking for the PDS, Andrea Lederer stated

that this event revealed the government's "terrible hypocrisy" on human rights questions. By this action it is strengthening an authoritarian regime.

Angelike Beer, a member of the Greens' federal executive, said that the government is actively involved in the military suppression of the democracy movements in Turkey. Once again the Greens called for a general ban on arms exports.

GREECE

Foreign Ministry Notes Nuclear Stockpile Removal

NC2205154192 Athens Elliniki Radhiotoni Radio Network in Greek 1130 GMT 27 May 92

[Text] A Foreign Ministry statement issued today says that Greece's nuclear stockpile will be removed from Greek territory. The statement adds: Within the framework of President Bush's initiative for the withdrawal of tactical nuclear weapons from Europe and following negotiations between the Greek and U.S. Governments, the Greek nuclear stockpile will be removed.

ITALY

Uranium Trafficking Discovered in Como

92W N03523 Rome LA REPUBBLICA in Italian 29 May 92 p.15

[Text] Como—A suitcase of uranium from the East. After months of investigations of the alleged traffic in radioactive materials taken from Red Army arsenals and consigned to the Middle East, the Deputy public prosecutor of the Republic at the Como court, Romano Dolce, has taken over the investigation. The results so far are certainly not calculated to arouse enthusiasm: four individuals sentenced to 20 months in prison for aggravated smuggling and one request for an individual—a Swiss national allegedly linked to the former KGB—to be remanded to the court for the same crime. The sentences were handed down against three Hungarian citizens and one Austrian citizen who were arrested last January in a hotel in downtown Milan in possession of a small bottle of uranium, a mortal element of many uses including military ones. The four have already been released from prison. The Swiss national in question is Karl Friedrik Eiderer, 42, of the San Gallio Canton; he is the individual who in practice triggered the maxi-investigation. In November of last year he was taken to the court in Como by the former MI operative Aldo Anghessa together with a source that was radioactive over a 24-hour period. The experts subsequently established that only a few micrograms of now decayed plutonium were involved. According to the judge's informers, that source was probably a sample of a much larger consignment destined for an Arab country. In fact, 30 kg of uranium were seized several weeks later in Zurich by the Swiss police. In this case as well, the experts explained that the material had an extremely low

rate of radioactivity and an insignificant economic value—material for which the traffickers were, however, asking astronomical sums. It was a colossal fraud according to the Swiss courts.

PORTUGAL

Reports Allege Past Sales of Uranium to Iraq

LNETH Involvement Questioned

92W P0231A Lisbon SEMANARIO in Portuguese 30 Apr 92 pp.16-17

[Article by Lilia Marcos: "Uranium Sales: Confidential Report"]

[Text] Portugal did in fact sell uranium to Iraq—a total of 213 tons of uranium (U)—in two lots. Or, put it another way, Portugal sold 253.4 tons of uranium oxide (U308), a compound that is thermodynamically more stable for purposes of transport. The difference between the volumes cited in the two cases, which might on occasion lead to error, is due to the fact that the compound has a content of only about 75-percent uranium.

The sales were made directly and not through the United States. This took place in the days of Sa Carneiro (Alvaro Barreto was minister of industry) and Pinto Balsemão (when Bairo Horta headed the ministry).

The first contract dates back to 1980, and it involved 122.4 tons of U308. The second, signed in 1982, involved 131 tons, again of uranium oxide.

All of this substance came from the National Uranium Company (ENU). Not a single milligram came from the so-called state stocks, for which the LNETH [National Industrial Engineering and Technology Laboratory] was responsible. Nor could it have, inasmuch as the uranium owned by the state became the responsibility of the LNETH only in August of 1984, although assets registered with ENU in 1982 were involved.

We are not the source of this assurance. The proof is to be found in an internal report of ENU bearing this month's date. It is now in the hands of the authorities (the Ministry and the Secretariat of State of Industry) and SEMANARIO has seen it. A certain passage therein reads precisely as follows: "The LNETH could never have done business with Iraq (sales between 1980 and 1982), nor even with the United States (sales in 1982 and 1983 resulting from the January 1982 contract)."

The document explains further: "In 1980 Eng. Alvaro Barreto was the minister who approved the contract signed with Iraq, and Eng. Antonio Silva Pinto was secretary of state for energy. In 1982-83 Eng. Bairo Horta was the minister who approved the contracts with Iraq and the United States, and Eng. Alberto Justiniano was secretary of state for industry."

Subsequently, and to dispel any doubt, the report goes so far as to emphasize that "the LNETI never made any sales."

Disparities Explained

The document goes on to list all of what it terms the sales of nuclear fuel. On this basis, we are herewith drafting and publishing two charts.

The document begins by identifying the "units" used—uranium, uranium oxide, physical tonnage—so that there will be no "errors" made in comparing data and figures, such as those "committed" by the media, according to the report.

It emphasizes, for example, the fact that the bodies dealing with this nuclear fuel, specifically the International Atomic Energy Agency (IAEA), Euratom (European Atomic Energy Community), and the specialized departments of the U.N., keep their accounts pertaining to this element in kilograms or tons of uranium, while, in international commerce, the quantities of uranium oxide (U₃O₈) are usually cited. And the report notes that the statistics of customs departments mention only the physical weight of the material because these bodies do not have the facilities required to establish the uranium content.

The report also underlines the existence of a mechanism for checking on the destination and the peaceful use of the material originally sold. The report notes that Portugal signed the international agreement on the nonproliferation of nuclear weapons and is therefore under obligation to inform the IAEA of all sales of uranium concentrate. And it gives assurance that it has done so. Up until 1985, it notified the IAEA of the quantities and destinations of all exports; and, as of 1986, after joining the EEC, it began to make these reports directly to Euratom.

The report further says that there is always a protective clause in the contracts pertaining to "peaceful uses" and that U₃O₈ is subject to IAEA control.

It makes no secret of the fact that, when resale occurs, the original seller ceases to have access to and control over subsequent sales, however. All that remains is the right and obligation of the IAEA to supervise and control the purpose or purposes for which it will be used. The report concludes that Portugal bears no responsibility for the use made of the material after one or more resale operations.

The report issues yet another warning, noting that the figures released by ENI have to do with exports resulting from sales of its stock, while the figures of the Ministry of Commerce (which have in some cases been critical) are the product of the ENI exports plus the sales "involved in the uranium (LNETI)."

Quantities and Buyers

For the first time, we have been given access to the official record of transactions of this kind—the direct sales made by ENI between 1977 (there were none in that year) and 1987.

However, this document does not provide a complete list of the purchasers. Especially, SEMANARIO has identified some of them.

For example, the 39 tons shown in the 1978 column went to the P.N.C. (Pm) (Japan) and to Nukem and Urangesellschaft (in the German Federal Republic (FRG)). The 30 tons sold the following year also went to the FRG. The 122 tons sold in 1980 went to Iraq, as has been stated. The buyers in 1982 were Iraq and the United States. The sales in 1983 were made to the United States and France (the report gives assurance that the port of Leixor was not used for any of these shipments, nor did the ENI management follow the material to the destination countries). In 1984 and 1985 (Veiga Simao was minister of industry), the material sold went to the United States—to the Wisconsin Electric Power Company and the Nuclear Trading Corporation in California. In that latter year, a contract agreement (sale carried out the following year) was signed with the French Electric (Power) Company (EDF). The agreement between ENI and the EDF, moreover, extended from 1986 to 1990 (Santos Martins and Moya Amatal as head of the Ministry of Industry). In 1991, a temporary contract (also known as a "spot") was signed between ENI and a subsidiary of the EDF (the SAE), pertaining to the last lot shown in this chart—95 tons of U₃O₈.

With regard to the chart of state stocks, the shipments made in 1982 and 1983 went to the United States (Energy Fuels Exploration), as a result, as has already been said, of agreements signed while Bataio Horta was in office.

Sources at the LNETI have assured SEMANARIO, moreover, that, after the reports blaming Veiga Simao came out, Bataio Horta took pains to assume personal responsibility for these shipments. They were shipments and sales authorized by a (civil) Ministers' resolution in that era.

It is further noted that the money resulting from these sales (1,222,373,461\$20) (as published) was included in the transfer of assets to the LNETI, along with the 493,626 tons of U₃O₈ (the quantities remaining after those shipments had been made).

Sources at the LNETI, for their part, tell us that, in a fax message dated 3 April, ENI gave assurance that it has these 493,626 tons in storage and that the handling of the money was effected in such a way that the sponsoring ministry had "prior knowledge" of it, the most recent report having been made in June of 1991 by Homem de Sousa, who was then vice president of the LNETI.

To summarize, both ENI and the LNETI seem to be prepared to provide "public clarification" in order to "reestablish the facts in the case." They would like to "eliminate all of the insinuations and suspicions entirely," particularly because "some of them are affecting the good names of both individuals and institutions."

Simao Seeks Facts

Veiga Simao and the ministry involved are turning everything around. It all began with the "inaccuracies, errors, and insinuations" utilized at the beginning of April by some media agencies to link him, as president of the LNETI, to sales of uranium.

No sooner had these reports been published than Veiga Simao reacted, defending his honor and that of the institution he heads. He stated that he never saw, nor did he sign or participate in any contracts involving nuclear fuel. He asked the ministry to establish the facts. He urged the board of directors of ENU to provide information on all of the LNETI uranium, which was placed in the custody of that public enterprise. (The following day he received a fax message stating that all was well.) In short, he reacted.

The sponsoring ministry (which we attempted to contact, but with no success) was not pleased. It described the statements made by Veiga Simao as "unfortunate" and likely to lead to "speculation prejudicial to the Portuguese state." And it ordered that "any reports on the matter" be channeled through the office.

In support of this direction, a ruling issued last December and circulated to all of the departments connected with the government was cited. It is an order calling for the submission (without exception) for review by the government leaders of all of the proposals for editorial undertakings, fairs, seminars, roundtables, advertising and educational campaigns, "projects with public relevance or political impact," and the like.

Sources close to Veiga Simao assure us that he reacted because he believes that the defense of his honor and the prestige of the LNETI is not in conflict with ministry policy, nor does it represent a violation of discipline, as was reportedly suggested to him.

Despite this, he respected the hierarchy and conducted himself properly. He said nothing further and channeled all of the reports collected to the ministry.

And he waited for some official statement or unofficial memorandum, at least of the sort he had requested, as to the "facts." None came from the ministry, despite the fact that it had in hand all of the "necessary data"—the ENU LNETI protocol, the fax message from ENU concerning the assets in its custody, the administrative report of Homem de Sousa, a complete list of all of the sales of said uranium (pursuant, moreover, to a Council of Ministers resolution), and so forth.

Apart from this "omission," the fact that the Ministry of Industry has announced the appointment of an investigation commission without setting a time limit for its report also rings false. This lack of a date was translated by LNETI leaders as meaning "indefinite postponement."

Perhaps all will be made "clear as day" very shortly because sources close to the ministry have given SEMANARIO to understand that the "green light" allowing the

LNETI and ENU to state the truth of the matter has already been given, or is about to be.

LNETI President Issues Denial

92W PU231B Lisbon DIARIO DE NOTICIAS
in Portuguese 6 May 92 p 24

[Unattributed article: "LNETI Denies Uranium Transactions"]

[Text] Veiga Simao, the president of the National Industrial Engineering and Technological Laboratory (LNETI), yesterday denied that he personally or the institution he heads had been involved "in any transaction" involving uranium that may have taken place between 1978 and 1992.

At a press conference, officials of the LNETI and of the National Uranium Company (ENU) attempted to explain the actions of their institutions in connection with the sales of uranium since 1981. They did so in response to the articles published recently in the press alleging dubious transactions involving various leading personalities.

Emphasizing that Mira Amaral had authorized the press conference, Veiga Simao said that he believes the statements in the articles mentioned "are defamatory and bring my personal honesty and that of the LNETI into question." As a result, this official announced that he has decided to file a complaint against the newspaper PUBLICO to the Chief Mass Media Authority and the Office of the Attorney General of the Republic, asking for compensation in the amount of 100,000 contos.

According to the reports published in that newspaper more than 467 tons of uranium in excess of the quantities officially reported have been sold abroad in the past 11 years, with Iraq as the possible final destination.

Mention has been made, in addition, of a number of discrepancies in the statistical data obtained from various Portuguese and foreign bodies—those in France and Iraq, in particular—as well as from the International Atomic Energy Agency (AIEA), which suggest that sales of uranium may have taken place in violation of the legal procedure.

In 1977, the year ENU was established, the state had 698.891 tons of uranium concentrate in its possession. It became the property of the LNETI in 1982. A part of this uranium, known as "state uranium," which was placed in the custody of this enterprise, is reported to have been sold to Iraq, although no such transaction appears in the records of the Ministry of Commerce and Tourism (MCT) or those of ENU itself. Veiga Simao has countered with the information that the LNETI uranium—493.628 tons of U3O8 concentrate—remains intact, and that no discrepancy exists between the AIEA data, which

shows 418 tons of uranium, and the records of the ENU, which show 493.6 tons of uranium oxide. He said that the ENU figures come to the same thing in the end, after the uranium oxide has been converted into uranium.

Many Doubts Remain

Despite this effort to clarify the situation, many of the questions raised still await answers. The officials of ENU and the minister of industry and energy himself are refraining from comment on the situation. They say that they are awaiting the report on the results obtained by the investigation commission appointed at the beginning of April to establish what Portuguese uranium was sold between the time ENU and the LNETI were established and 1992.

Jose Betancourt, one of the ENU administrators present at the press conference, is still using the results of the report as a shield to avoid commenting on the contradictions resulting from a comparison of the statistical data contained in the reports of the General Geology and Mines Offices, the MCT, the LNETI, and ENU, with the sales of uranium to Iraq.

It was only after considerable insistence that Jose Betancourt denied any "back-door" transactions in uranium, specifically, with Iraq. He noted that "ENU is not waiting for the results of the investigation before saying whether or not it did this."

"The ENU records are accurate. On that basis, none of the speculation about discrepancies in which some may wish to engage has anything to do with us," he stated.

SPAIN

Missile Program Hidden Agenda Alleged

92ES0836A Madrid TIEMPO in Spanish 18 May 92
pp 60-63

[Article by Fermin Gallego Serra: "Spain Building 'Capricornio' Missile Capable of Reaching Entire Maghreb"]

[Text] The INTA [National Institute for Aerospace Technology] (Defense Ministry) Capricornio satellite-launching rocket program hides a plan to develop a long-range ballistic missile capability. It involves the updating of another plan dating back to 1970, whose aim as of then was to obtain ballistic missiles tipped with nuclear warheads for Spain.

During the recent seminars held by the Defense Ministry to provide information on its space programs, a high official of the Ministry's INTA disclosed that Spain "is on the way, finally, to obtaining the technology necessary to develop a missile with a range of over 1,000 kilometers, derived from the Capricornio launcher and tipped with an explosive warhead." However, the details and capabilities relating to military uses of Capricornio were diligently kept from the journalists present.

The same INTA source dwelt at length on the connection between Capricornio and the old plans instituted in 1970 at the initiative of JUJEM [Council of Chiefs of Staff], the predecessor of the present JEMAD [Defense Chief of Staff] before the current Defense Ministry came into existence, and, in its place, each of the three branches of the Armed Forces had its own ministry: "At that time, INTA was working on the development of a national missile, with a view to equipping it with a warhead that was to be developed by JEN [Nuclear Energy Board]. The idea of that warhead has now been discarded," the source continued, "because the use of a nuclear weapon is unthinkable, and it would therefore have no deterrent effect."

However, given the limited payload capacity of the missile—some 500 kilograms, at most—the enormous economic investment the manufacture of a number of those rockets would require would make no sense, in the opinion of various experts consulted, unless each of them were to carry an extremely lethal payload such as, for example, an atomic bomb. INTA's director himself, Enrique Trillas, stated that its preproduction stage alone—that is, its design study and development stage—calls for an investment of some 3 billion [thousand million] pesetas.

Because Spain has signed the Non-Proliferation Treaty, it cannot now resort to nuclear weapons. But it could employ another very powerful weapon that it does have and that is not limited by any treaty: the FAE [Fuel Air Explosive] superbomb. In the opinion of the same source, this type of weapon would justify the military version of that missile, and he added: "We all know that things are becoming more complicated in the south and that it is a mere matter of time before we will be having problems. It behooves us, therefore, to prepare the big stick...and the chances are that doing so will actually obviate our having to use it."

Secret Bomb

The BEAC [FAE bomb development program] is a project the Defense Ministry instituted some years ago in utmost secrecy—during Narcis Serra's tenure as minister of defense—contracting with Explosivos Alaveses for its development. The weapon was developed, and tests were begun over the waters of the Mediterranean after a delay of almost one year, occasioned by the Gulf war, and after deciding not to hold them over the Las Bardenas Proving Ground, in view of their awesome explosive effect.

The overpressure generated by FAE weapons is so intensive that they have been likened in that respect to "atomic minibombs," although without the radioactive contaminating effects of the latter. It is known that, during the crisis that preceded the Gulf war, the Iraqis made fruitless attempts to get hold of them, through German and British technologies, in order to integrate them with the ground-to-ground missiles they subsequently launched against Israel and Saudi Arabia. The Americans, for their part, used them under the name of

"daisy cutters" to blow up large-scale minefields, thus opening up corridors for the advance of their troops.

For months now, rumors have circulated in military circles in Spain that the instability of the FEA bomb, finally developed and tested, would compel abandonment of the BEAC program, owing to the hazards inherent in the storage of the bomb. It was also said that, in the half-dozen test explosions that were run, a way could not be found to control its operation with any degree of precision. Certain sources assert, however, that both versions have been planted in order "to bring BEAC back under secret cover, from which it never should have been allowed to exit," and that, in reality, the BEAC program continues on a sound footing.

U.S. Veto

According to official INTA documents, the object of the Capricornia project is to "update our national capability in the technology of rocket motors, through the development of a launch vehicle." The current stage of INTA's work on the project "has added impetus to the propulsion activities developed by the Institute during the 1970's...." The document goes on to state that "developments in this field, however, were interrupted as a result of the difficult years INTA endured toward the end of the 1970's and during the 1980's; but that activity has now taken on new impetus, with the experience accrued in the past as its point of departure."

Aside from the political circumstances of the transition, according to the INTA source mentioned at the beginning of this article—who has requested anonymity—this INTA documentation's mentions of difficulties could be referring also to the technological ones encountered in the development of a nuclear-tipped ballistic missile. The difficulties encountered by that 1970 project were of three kinds.

In the first place, a gyroscopic platform—that is, a device for the orientation and precision guidance of the rocket—had to be obtained. This instrument was beyond the capabilities of Spanish industry, and its acquisition from U.S. companies was officially blocked by that country's authorities. For reasons of policy, General Franco's regime must not have a long-range missile.

The second was another technical difficulty that INTA was unable to overcome two decades ago—namely, the solid fuel or powder for the propellant, although, according to the same source, "We were very close to resolving it then and are even closer to doing so today: The solid fuel with which we are working at present is a compound of the butadienes type."

And third, in the 1970 project, a number of mechanical reliability aspects needed to be improved, but the halting of the program prevented the completion of this work. Only the INTA 100 and the INTA 300 test rockets were built, and only the stages preceding the building of an authentic satellite-launching rocket were completed.

With INTA responsible for the development of the missile, JUJEM assigned responsibility for the nuclear ogive to JEN, installed in La Moncloa, where it had JEN 1, a small research-type reactor that was nevertheless capable of assisting in acquiring the technology needed to produce the necessary plutonium for the bomb.

Canary Islands

Two of the first civil nuclear-power-generating plants built in Spain—Burgos (1971) and Vandellós I (1972)—were to be used for the production of the plutonium needed for the production of atomic bombs. France was prepared at that time to collaborate with regard to the plutonium production technology. It was to be the materialization of De Gaulle's old policy of *grandeur*, which barred agreement to any control in which the United States was involved and which led France to unlock the door of the bomb to Israel and, subsequently, to other countries, including Iraq. Had it not been for Israel's bombardment of Iraq's Osirak reactor at about the beginning of the 1980's, Iraq would have become a nuclear power much before 1990.

Current plans calling for a transfer of the technology to Spain will make it possible for missiles with ranges on the order of 1,300 kilometers, launched from the Arenosillo base in Huelva, to include in their effective radius most of Morocco and Algeria—that is, almost all of the Maghreb entering into Spain's Zone of Strategic Interest as defined in the latest PEC (Joint Strategic Plan) approved by the nation's government. In addition, the need for a rocket-launching complex in the Canary Islands for the orbiting of commercial satellites would create another launch facility for the military version, thus augmenting its area of coverage, to include southern Morocco, without having to increase the capabilities of the missile itself.

During the recent Defense seminars in the Canaries, a militarily owned stretch of land on the Island of Fuerteventura was cited as available for the construction of a rocket-launching complex.

As for what may lie hidden beneath the Capricornia program, Enrique Trillas, INTA's managing director, mentioned textually "patriotic motives, in addition to its economic interest" as reasons underlying the space program being developed by the institute.

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